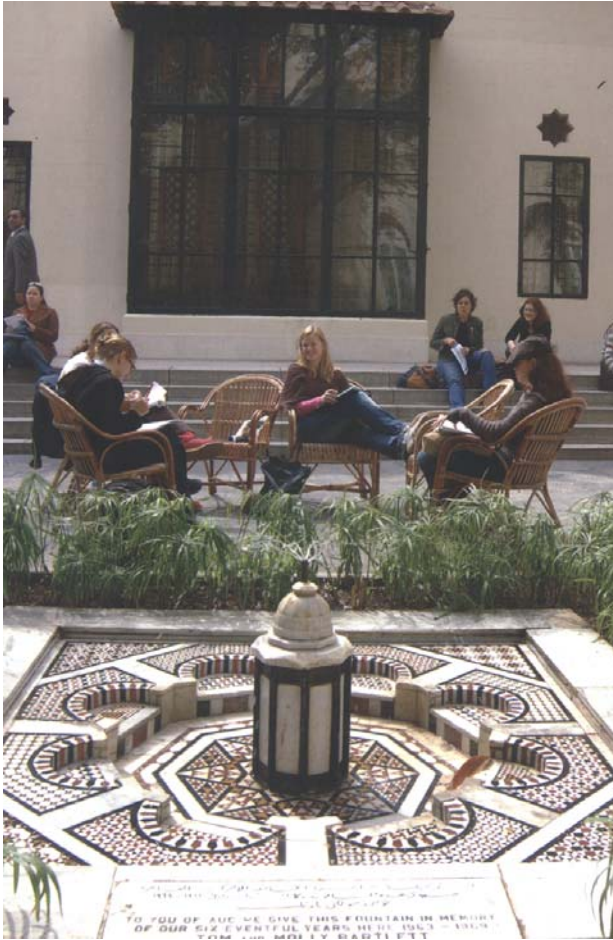




THE AMERICAN UNIVERSITY IN CAIRO



Catalog

2005 - 2006

General Information

Student Responsibility

Students are responsible for familiarizing themselves with the information presented in this catalog and for observing all policies and procedures related to their participation in the university community. In addition, AUC has adopted a set of policies and procedures concerning the statutes and regulations on the campus. Copies of these policies and procedures may be obtained at the Office of the University Registrar.

Regulations will not be waived nor exceptions granted based on a student's lack of awareness of the policies and procedures of the American University in Cairo. Although a number of university personnel (e.g. advisors, faculty members, registrar, departmental staff, and student affairs staff members) assist students, the student is personally responsible for following all policies and meeting deadlines and requirements. This responsibility includes, but is not limited to, academic requirements and the rules listed under the appropriate information sections of this catalog.

Privacy Rights of Student Records

Students have the right to access their own official records. The written consent of the student must be received before personally identifiable data is released from the student's records to any party other than the exceptions specified below.

While the university is authorized under the United States Family Educational Rights and Privacy Act of 1974 to release "directory information" about students, AUC does not publish a student directory. Student information is subject

to release by the university unless the university has received prior written objection from the student specifying information that the student requests not to be released. Such written objection should be submitted to the Office of the University Registrar.

AUC is authorized to provide access to student records to campus officials and employees who have legitimate educational interests in such access. These persons are those who have responsibilities in connection with the academic, administrative, or service functions of the university and who have reason for using student records connected with their academic or other university responsibilities. Disclosure may also be made to other persons or organizations under certain conditions (e.g. as part of an accreditation or program evaluation; in response to a court order or subpoena; in connection with financial aid; or to US institutions to which the student is transferring).

UNIVERSITY CALENDAR: 2005-2006

Fall Semester 2005

August	29	Mon	Beginning of Fall Semester 2005
August	29	Mon	
September	11	Sun	Late Registration & Course Changes
August	30	Tue	Orientation for New Egyptian Graduate Students
August	30-31	Tue-Wed	ALI Registration, Written & Oral Placement Exams
August	31	Wed	Orientation for New International Graduate Students
September	1-4	Thu-Sun	Orientation for International Students
September	3-4	Sat-Sun	Orientation for New Undergraduate Students & Parents
September	4	Sun	Deadline for tuition and fees payment without late fees for continuing students
September	5	Mon	Orientation for ALI Students
September	5	Mon	Classes Begin
September	5-11	Mon-Sun	Registration Period for Auditors
September	6	Tue	Classes Begin for ALI Students
September	11	Sun	Closing Date: late registration, payment & course changes
October	2	Sun	Fall 2005 Census Day
October	4	Tue	Start of Ramadan
October	6	Thu	Armed Forces Day (H)
November	3	Thu	
November	6	Sun	Eid El Fetr (H) *
November	24	Thu	Thanksgiving (H)
December	4	Sun	Deadline to drop courses
December	4	Sun	Deadline for withdrawal: Undergraduate Students
December	8	Thu	Deadline for withdrawal: Graduate Students
December	15	Thu	Deadline: financial aid application for Spring 2006
December	15	Thu	Last Day of Classes
December	17	Sat	
December	22	Thu	Semester Examination
December	22	Thu	ALI Last Day of Classes & Final Exams
December	23	Fri	
January	31	Tue	Mid-Year Recess
December	24	Sat	
December	25	Sun	Western Christmas (H)
December	26	Mon	Deadline to submit final grades
January	1	Sun	New Year's Day (H)
January	7	Sat	Eastern Christmas (H)
January	8	Sun	
January	12	Thu	Eid El Adha (H) *
January	19	Thu	Baptism Day

Winter Session 2006

January	2	Mon	Winter Session
January	26	Thu	

Spring Semester 2006

January	24	Tue	Beginning of Spring 2006 semester
January	24-25	Tue-Wed	ALI Registration, Written & Oral Placement Exams
January	25	Wed	Orientation for New International Graduate Students
January	25	Wed	
February	7	Tue	Late Registration & Course Changes
January	26	Thu	Orientation for New Egyptian Graduate Students
January	26-29	Thu-Sun	Orientation for International Students
January	29&31	Sun&Tue	Orientation for New Undergraduate Students & Parents
January	30	Mon	Islamic New Year (H) *
January	31	Tue	Deadline for tuition and fees payment without late fees for continuing students
January	31	Tue	Orientation for ALI Students
February	1	Wed	Classes Begin
February	1	Wed	Classes Begin for ALI
February	1-7	Wed-Tue	Registration Period for Auditors
February	7	Tue	Closing Date: late registration, payment & course changes
February	7	Tue	Commencement – Graduates
February	9	Thu	Commencement – Undergraduates
February	28	Tue	Spring 2006 Census Day
April	10	Mon	EI Mawled EI Nabawi (H) *
April	12	Wed	International Day **
April	16	Sun	Western Easter (H) and Palm Sunday (H)
April	16-25	Sun-Tue	Spring Break (H)
April	20	Thu	
April	24	Mon	Holy Thursday, Eastern Easter & Sham EI Nessim (H)
April	25	Tue	Sinai Liberation Day (H)
April	27	Thu	Deadline to drop courses Deadline for withdrawal: Undergraduate Students
May	1	Mon	Labor Day (H)
May	16	Tue	Deadline: financial aid application for Fall 2006
May	18	Thu	Deadline for withdrawal: Graduate Students
May	25	Thu	Last Day of Classes
May	27	Sat	
June	1	Thu	Semester Examination
May	29	Mon	ALI Last Day of Classes & Final Exams
June	4	Sun	Deadline to submit final grades

Summer Session 2006

June	5-6	Mon-Tue	ALI Registration, Written & Oral Placement Exams
June	5-12	Mon-Mon	Late Registration & course changes
June	7	Wed	Orientation for International Students
June	7	Wed	Orientation for ALI Students
June	8	Thu	ALI Classes Begin
June	8	Thu	Deadline for tuition and & fees payment without late fees for continuing students
June	11	Sun	Classes Begin
June	13	Tue	Commencement – Graduates
June	15	Thu	Commencement – Undergraduates
June	12	Mon	Closing date: late registration, payment, and Course changes for Summer Session 2006
June	22	Thu	Summer 2006 Census Day
July	6	Thu	Deadline for dropping and withdrawal from Summer 2006 session
July	20	Thu	Last Day of Classes
July	21-22	Fri-Sat	Semester Examination
July	23	Sun	Revolution Day (H)
July	25	Tue	Deadline to submit final grades
July	27	Thu	Last Day for ALI Classes & Final Exams

* Exact date will be confirmed by official notice.

** Classes will be held until 11:00 am and resumed at 4:30 pm

UNDERGRADUATE DEGREE PROGRAMS

Bachelor of Accounting Bachelor of Arts

Anthropology
 Arabic Studies
 Arabic Studies with specializations
 in Arabic Literature & Middle
 Eastern History
 Art
 Economics
 Egyptology
 English & Comparative Literature
 Journalism and Mass Communication,
 with specializations in Broadcast
 Journalism, Integrated Marketing
 Communication & Journalism
 Middle East Studies
 Modern History
 Philosophy
 Political Science
 Political Science, with specializations
 in International Relations, Middle
 East Politics, Political Economy,
 Public & International Law
 Psychology
 Sociology
 Theatre

Bachelor of Business Administration

Bachelor of Science

Actuarial Science
 Biology
 Chemistry, with a specialization in
 Clinical Chemistry & in Industrial
 Chemistry
 Computer Science
 Construction Engineering
 Electronics Engineering
 Mathematics with an option in
 Statistics & Data Analysis
 Mechanical Engineering, with
 specializations in Materials and
 Manufacturing, Design and
 Industrial Engineering
 Physics with an option
 in Instrumentation

Undergraduate Minors

Accounting
 African Studies
 American Studies
 Anthropology
 Applied Probability and Statistics
 Arab and Islamic Civilization
 Arabic Literature
 Archaeological Chemistry
 Architectural Design
 Art
 Biology
 Business Administration
 Chemistry
 Classical/Medieval Islamic History
 Computer Science
 Coptic Studies
 Development Studies
 Economics
 Egyptology
 Electronics
 English and Comparative Literature
 Environmental Science
 European-World History
 Film
 Gender Studies
 Information Systems
 International Relations
 Islamic Art and Architecture
 Islamic Studies
 Journalism and Mass Communication
 Linguistics
 Mathematics
 Middle East Politics
 Modern History
 Modern Middle Eastern History
 Music
 Philosophy
 Physics
 Political Economy
 Political Science
 Psychology
 Sociology
 Theatre
 United States History

GRADUATE DEGREE PROGRAMS

Master of Arts

Arabic Studies, with specializations
in Islamic Art & Architecture,
Arabic Language and Literature
and Middle Eastern History

Economics

Economics in International Development

English & Comparative Literature

International Human Rights Law

Journalism and Mass Communication

Middle East Studies

Political Science, with specializations

in Comparative Politics,

Professional Development, and

International Relations,

Sociology-Anthropology

Teaching Arabic as a Foreign Language

Teaching English as a Foreign Language

Master of Business Administration

with concentrations in

Accounting, Finance, Management,

Management of Information

Systems, Marketing &

Operations Management

Master of Laws (LL.M.) International and Comparative Law

Master of Public Administration

Master of Science

Computer Science

Engineering, with options in Construction

Engineering, Design, Environmental

Engineering, Industrial Engineering,

and Materials & Manufacturing

Physics

Graduate Diploma

American Studies (*to be launched in fall 2006*)

Computer Science

Economics in International Development

Engineering

European Studies

Forced Migration and Refugee Studies

Islamic Studies

Middle East Studies

Physics

Political Science

Teaching Arabic as a Foreign Language

Teaching English as a Foreign Language

Television Journalism

THE UNIVERSITY

Statement of Mission

The mission of the American University in Cairo (AUC) is to provide high quality educational opportunities to students from all segments of Egyptian society as well as from other countries, and to contribute to Egypt's cultural and intellectual life. The university offers programs at the undergraduate, graduate and professional levels as well as an extensive continuing education program. The language of instruction is English.

The university advances the ideals of American liberal arts and professional education and of life-long learning. As freedom of academic expression is fundamental to this effort, AUC encourages the free exchange of ideas and promotes open and on-going interaction with scholarly institutions throughout Egypt and other parts of the world.

The pursuit of excellence is central to AUC's mission, and the university maintains high standards of academic achievement, professional behavior and ethical conduct. Toward this end it also provides a broad range of disciplines and learning opportunities and strives to contribute to the sum of human knowledge.

The university environment is designed to advance proficient use of the tools of learning as well as students' thinking capabilities, language and personal skills. Through its adult and continuing education programs, the university offers educational opportunities to enhance the professional and job skills of non-degree students.

AUC considers it essential to foster students' appreciation of their own culture and heritage and of their responsibilities to society. The university's aim of promoting international understanding is supported by means of scholarship, learned discourse, a multicultural campus environment, and a diversified publishing program.

To advance its mission, the university seeks to maintain a highly qualified faculty. Emphasis is placed on excellence in teaching as well as on research, creative work and faculty members' intellectual contributions to their disciplines. Outstanding administrative, professional and support staff, leading edge instructional technology and use of other resources are also central to the pursuit of the university's aims.

The American University in Cairo is an independent, non-profit, apolitical, non-sectarian and equal-opportunity institution.

History

The American University in Cairo was founded in 1919 by Americans devoted to education and service in the Middle East. For its first 27 years the university was shaped by its founding president, Dr. Charles A. Watson. He wanted to create an English-language university based on high standards of conduct and scholarship and to contribute to intellectual growth, discipline, and character of the future leaders of Egypt and the region. He also believed that such a university would greatly improve America's understanding of the area.

Initially, AUC was intended to be both a preparatory school and a university. The preparatory school opened on October 5, 1920, with 142 students in two classes that were equivalent to the last two years of an American high school. The first diplomas issued were junior college-level certificates given to 20 students in 1923. At first an institution only for males, the university enrolled its first female student in 1928, the same year in which the first university class graduated with two B.A.'s and one B.S. degrees awarded. Master's degrees were first offered in 1950.

Originally AUC offered instruction in the arts and sciences and in education. In 1921, the School of Oriental Studies was added to the university, followed in 1924 by the Division of Extension. This division was later renamed the Division of Public Service, and finally evolved into the Center for Adult and Continuing Education. AUC's high school division, known as the Lincoln School, was discontinued in 1951.

In 1956, the School of Oriental Studies was incorporated into the Faculty of Arts and Sciences as the Center for Arabic Studies. The English Language Institute was added the same year. After the Faculty of Education was discontinued in 1961 and degree offerings were dropped from the Division of Public Service, university degree work was consolidated into a single academic structure, the Faculty of Arts and Sciences. Programs in sociology, anthropology, political science and economics were added to the curriculum and the natural science offerings were significantly expanded.

Two applied research units, the Social Research Center and the Desert Development Center, were established in 1953 and 1979, respectively. Another landmark in the history of the university was the development of professional programs: the departments of Engineering, Computer Science, Journalism and Mass Communication, and Management now offer several degree programs at the Bachelor's and Master's levels.

In 1960, AUC enrolled approximately 400 academic students. By 1969 the university had more than tripled its degree enrollments to over 1,300 students, 450 of whom were pursuing graduate studies. Since then academic program enrollments have grown to 5,294 students (Fall 2004), including 928 students at the Master's degree level. Adult education expanded simultaneously and now serves over 32,500 individuals each year in non-credit courses and contracted training programs.

In 1993 the academic programs offered through 13 departments were organized into three schools: Humanities and Social Sciences; Sciences and Engineering; and Business,

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Economics and Communication. Educational training and major research projects continue to be carried out through the Center for Adult and Continuing Education, the Management Center, Engineering Services, the Desert Development Center and the Social Research Center. Through subsequent reorganizations and additions, as of the 2004 fall semester the university has 22 departments/institutes offering undergraduate, masters and graduate diploma programs.

Throughout its history, AUC has balanced a strong commitment to liberal education with a concern for the region's needs for practical applications and professional specializations. Today, AUC emphasizes liberal education and all undergraduate students study a common set of courses in the humanities and the natural and social sciences as part of the university's core curriculum. In addition, the university maintains its strong commitment to fostering understanding across world regions, cultures and religions.

Accreditation

In the United States of America, AUC is licensed to grant degrees and is incorporated in the State of Delaware. AUC is accredited in the US by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, 215-662-5606. The last visit by a full accreditation team took place in May 1998 as a part of the ten year re-accreditation review process. In November 2003, the Commission accepted the Periodic Review Report submitted by AUC and reaffirmed accreditation. The next evaluation visit is scheduled for 2007-2008.

In Egypt the university operates as a private cultural institute within the framework of the 1962 Egyptian-American Cultural Cooperation Agreement, in accordance with an implementing protocol with the government of Egypt. This protocol, promulgated as a presidential decree and ratified by the Egyptian People's Assembly in 1975, recognizes the university's degrees as equivalent to those awarded by Egyptian national universities.

Governance and the Board of Trustees

The university is governed by a self-perpetuating Board of Trustees, currently consisting of thirty-eight members drawn from various fields of endeavor; the President of AUC is also an ex-officio member of the Board. In addition, there are twenty-one individuals designated as Advisory Trustees, many of whom have rendered distinguished service on the Board in past years. The Board has its own by-laws and elects a chair for an annual term. A complete list of members, officers of the Board, and advisory trustees is provided in an appendix to this volume.

The Board meets generally three times a year; the May and November meetings are held in New York, and the February meeting is held on the Cairo campus. The Cairo meeting enables Board members to review developments first hand, and to meet with faculty, students and staff.

The Board of Trustees reviews and approves all major policies, the university budget and major facilities and program development plans. It sets the annual tuition rates and provides leadership in raising funds for the university. The university is administered by a president selected by the Board of Trustees. The current president of AUC is Mr. David D. Arnold.

The presidents of the university:

Name	Years of Service
1. Dr. Charles R. Watson (Founder)	1919-1945
2. Dr. John S. Badeau	1945-1954
3. Dr. Raymond F. McLain	1955-1963
4. Dr. Thomas A. Bartlett	1963-1969
5. Mr. Christopher Thoron	1969-1973
6. Dr. Cecil K. Byrd	1974-1977
7. Dr. Richard F. Pedersen	1978-1990
8. Dr. Donald McDonald	1990-1997
9. Dr. John D. Gerhart	1998-2002
10. Mr. David D. Arnold	2003-present

AUC Faculty

The faculty of AUC is a highly qualified group of academics and professionals who are committed to finding innovative ways to meet the educational needs of AUC students. The university's full-time faculty is complemented by an extensive part-time teaching staff, frequent visiting lecturers, and the Distinguished Visiting Professor program.

AUC's full-time teaching faculty is primarily American and Egyptian, in addition to citizens from about a dozen other countries. By drawing from the national universities, business and professional communities and the Egyptian government, AUC has recruited a well-qualified part-time faculty. These academics, business leaders, journalists, government officials, and professionals bring their practical experience to the classroom. The exchange of ideas also takes place on a more informal basis as academic departments and student organizations invite experts from a wide range of professional fields to give lectures and demonstrations during the weekly assembly hours and in the evenings.

To augment its educational and cultural offerings, the university established many years ago a Distinguished Visiting Professor program which brings to the AUC campus a number of eminent scholars, writers, and artists for short-term lectureships or workshops. Some of these professorships are supported by named endowments or annual grants in recognition of their importance to the university and the community. Current DVP endowments include the Christopher Thoron DVP, the Bayard Dodge DVP in Arabic Studies, the General Dynamics DVP in Engineering, the Charles J. Hedlund DVP in Middle East Studies, and the Endowed DVP in English and Comparative Literature.

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Campus

Cairo, the largest urban center in the Arab World and Africa, lies in the Nile Valley where it begins to broaden into the fertile delta. One of the world's oldest cities, Cairo is inheritor and protector of many traditions — Pharaonic, ancient Greek and Roman, Coptic, Islamic and Arabic. It is at the same time a contemporary center for international development and Middle East policy.

The American University in Cairo is located on Tahrir Square in downtown Cairo, near government ministry buildings, hotels and commercial areas, the National Cultural Center, and the Egyptian Museum. The campus (see map inside the back cover) covers parts of five city blocks. Gracefully situated on the main campus are a converted palace, outdoor basketball and tennis courts, gardens, and a fountain area. The original university building, which opened in 1920, was constructed as a palace in the 1860s for the Minister of Education Khairy Pasha. The building briefly became the headquarters of the Egyptian University (now Cairo University) in the early 1900s and was acquired by AUC in 1919. The palace now houses central administrative and faculty offices and a number of classrooms.

Additions constructed on the main campus between 1927 and 1932 include Ewart Memorial Hall, one of the most culturally active auditoriums in Cairo; Oriental Hall; and wings on either side which house the English and Comparative Literature Department, and the English and Arabic Language Institutes. Two other buildings were added later to the main campus, Hill House, built in 1952, now serves as a student center, and the six-story Science and Engineering building was completed in 1966.

Located a half block from the original campus, the Greek campus was acquired in the 1960s. It contains the university's social science departments, the Jameel Management Center (added in 1989), the Center for Adult and Continuing Education, a cafeteria, and the university's library (added in 1982).

Other sections of city blocks near the main campus contain AUC classrooms, student services, offices, and the Special Collection and Rare Books library. In 2001 a major new academic center building was completed on the Falaki campus. This multi-story building contains new classrooms and faculty offices and includes theaters for performing and visual arts productions and other events.

Two AUC buildings located further from the core campus group include a ten-story dormitory in the Zamalek area of Cairo providing housing for students and faculty, and a building in the Heliopolis area used primarily for continuing education classes. AUC also has an extensive housing program for relocated faculty and staff.

AUC is creating a new campus, to be built on a site that the university has purchased in the New Cairo development area. The official ground breaking ceremony for construction of the new campus took place in February of 2003. The target date for moving to the new campus is the fall of 2007.

Profile: Fall 2004

I. Academic Programs

Faculty	364 full-time, 262 part-time	
	The full-time faculty:	
	51.9% Egyptian	
	37.9% United States of America	
	10.2% Other Countries	
Students		5,294
	Undergraduate Degree	3,940
	Graduate Degree	928
	Graduate Diploma	22
	Non-degree	272
	Special Programs	132
Citizenship	Egyptian	4,398
	Other Countries	896

II. Center for Adult and Continuing Education

Faculty	1 full-time, 425 part-time	
Total number of individuals served during fiscal year 2003-2004		32,556

III. 2004-2005 Budgeted Operating Expenses: \$67.5 million

Revenues	Academic Tuition and Fees	55.5%
	Endowments and Contributions	15.9%
	Draw on Endowment Gains	8.3%
	Auxiliary Enterprises	8.1%
	Education Enterprises	7.7%
	Research	3.2%
	Miscellaneous	1.3%
Expenditures	Academic and Academic Support	51.0%
	Administration and General	16.4%
	Auxiliary Enterprises	8.6%
	Plant Operation and Maintenance	8.5%
	Educational Enterprises	7.5%
	Contingency and Miscellaneous	4.1%
	Research	4.0%

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Financial Support

The University was established and has been sustained throughout most of its history through the generosity of private individuals, the majority of them Americans. The founding trustees, mostly from Pittsburgh, Pennsylvania, donated funds to purchase the University's main campus and to cover most of the salaries and expenses of the teaching staff. Despite the financial crises generated by the Great Depression, World War II, and the 1967 Six-Day War, neither the University's academic programs nor its financial support has ever been interrupted.

For the first forty years, the Weyerhaeuser family and the Pittsburgh families of McCune, Gillespie, Lockhart, and Craig, with additional help from other individuals, covered much of the University's operating deficits. Hill House was built and later renovated with funds donated by the Weyerhaeuser family in honor of William Bancroft Hill, a family member who chaired the University's Board of Trustees for twenty years. Ewart Hall and Oriental Hall were also funded by private gifts during this period. The role of a number of American foundations, notably the Ford Foundation, has been significant to the overall development of the University. After the turbulent mid-1950's such help strengthened several units including the Social Research Center, the English Language Institute, the Graduate Management Program, and the Desert Development Center. In subsequent years, other foundations and international agencies supported specific projects and research. They include the Near East Foundation; the International Development Research Center (Canada); the United Nations Educational, Scientific and Cultural Organization; the World Health Organization; the U.S. Agency for International Development; the United Nations Development Program; the African Development Foundation; the U.S. Department of Education; the Fulbright Commission; the Tokyo Foundation (formerly the Sasakawa Foundation); the United Nations Children's Fund; the Smithsonian; the AT&T Foundation; Schlumberger; the Amoco Foundation; the Mobil Foundation; Pfizer; the Mellon Foundation, the Starr Foundation, the Getty Grant Program and others.

During the 1950's and 1960's the nature of Egyptian-American relations impeded AUC fundraising efforts. The trustees' long-range plans, however, indicated the need for the University to expand if it were to remain a viable institution. Thus in 1959, AUC for the first time obtained U.S. government funding through the Agency for International Development (AID). AID funds derived primarily from U.S.-owned surplus Egyptian pounds resulting from American wheat sales to Egypt in the 1950's. This support allowed AUC to construct and equip its science building as well as to nearly double the size of its campus with the purchase of the nearby Greek community school. In the mid-eighties, AID had provided funds for the construction of a modern library on the Greek campus and for a dormitory in Zamalek that has been in use since 1991. AID also funded a campus-wide fiber optic network in fiscal year 1993.

The restoration of Egyptian-American relations in 1974, along with the establishment of Egypt's Open Door economic policy, allowed AUC to set the process in motion for increasing its financial independence and security. Three major factors contributed to the success of this mission.

First, the University instituted gradual tuition increases. Now the largest source of income for the University, tuition accounts for more than fifty-three percent of AUC's operating budget. AUC continues to provide tuition support for its Egyptian students, who comprise eighty-five percent of the student body, and offers both academic and need-based scholarships.

Second, in 1982, AUC launched a major fundraising campaign. The goal of the five-year campaign was to raise \$22 million from private sources in the United States, Egypt, Saudi Arabia, and the Gulf states. Additionally, the University sought to develop a tradition of giving among alumni. In 1987, the University announced the successful completion of the campaign, having raised over \$24 million. Not only did the University achieve its financial goal, but it also succeeded in increasing alumni participation. Among alumni donations was a major gift from a Saudi Arabian alumnus and his family to build the Jameel Center. Corporate sponsorship also increased, with significant support coming from American, Egyptian, Saudi Arabian, Italian and Japanese companies and foundations.

Third, the United States Congress passed legislation in 1985 that provided for the establishment of a trust fund at the American Embassy in Cairo with the income designated for AUC. Because the Egyptian pound was devalued in the years following the trust's creation, further legislation was passed in 1989 to restore it to the original value. The income from this trust replaces Egyptian-pound support formerly provided through congressional appropriations. In 1997, the University received a second trust fund from USAID.

In 1993, the Board of Trustees approved a long-range plan that set University fundraising priorities for the following five years. The highest priorities were to increase annual giving and student scholarships and fellowships, enhance the quality of academic programs through the acquisition of chairs and professorships, build the endowment for library acquisitions, and obtain funding for the University's newest facility: the Falaki Academic Center. The new center provides much needed classroom and laboratory space as well as theaters and galleries for art students' performances and exhibitions.

In 1998, the Board of Trustees approved the purchase of a 260-acre area outside of downtown Cairo that will be the site of a new, integrated campus for AUC. Plans are underway to design and build this new facility.

Scholarships and Fellowships

In addition to scholarships and financial aid provided by the University, many individuals and corporations have demonstrated their commitment to higher education in Egypt by establishing scholarships and fellowships at AUC. Eligible students may apply at the Office of Student Financial Affairs.

Annual scholarships and fellowships are made possible through donors who contribute support each year to partially cover the tuition of one or more undergraduate and/or graduate student(s):

- **Ayman Korra Public School Scholarship:** established in 2005 to support one Egyptian

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student graduating from an Egyptian public school for a period of six years.

- Bailey African Graduate Students Fellowship: awarded to African graduate students, with preference given to Sudanese nationals.

- Ibrahim Shihata LL.M Fellowships: established in 2004 in memory of Dr. Ibrahim Shihata, General Counsel and Vice President of the World Bank, for deserving graduate students from Arab law schools. The LL.M Fellowships have received the generous support of Mrs. Samia Shihata '67, AUC Trustee Mr. Moataz Al-Alfi, Mr. Sarwat Abdel Shahid, the Al Kamel Law Office, the Shalakany Law Office and Zaki Hashem and Partners.

- Investcorp Scholarship: established in 2001 and awarded to a Bahraini student based on academic merit and financial need.

- Jameel MBA Fellowships: established in 2004 to provide financial assistance to Egyptian and Palestinian engineering and science graduates so that they may pursue an MBA degree at AUC.

- Merit Scholarship for Women: awarded to an undergraduate female student in economics or science based on merit first and need second.

- Nashwa A. H. Taher Scholarship: established in 2002 to support the education of five undergraduate female students from Palestine and other Arab Countries (excluding Egypt) who have met AUC's academic requirements, enrolled in the University and demonstrated financial need.

- Palestinian Scholarship Fund: established in 2002 and awarded to Palestinian students from the Occupied Territories based on financial need.

- Public School Scholarships Fund: established in 1998 in support of outstanding undergraduate Egyptian students graduating from Egyptian public schools on the basis of academic merit and financial need.

- BP Egypt Public School Scholarship: established in 2002 and designated for the education of an Egyptian student who has graduated from a public school in Egypt, preferably majoring in Engineering, Computer Science, Economics or Business. The student must maintain a GPA of not less than 3.5 during the course of study at AUC and having an outstanding Thanawiyya Amma score. The scholarship includes a summer internship at BP Egypt starting summer 2003.

- BP Egypt Public School Scholarship: established in 2003 to support an Egyptian student who has graduated from a public school in Egypt. Preference is given to an undergraduate student majoring in mechanical engineering or environmental engineering. BP Egypt will offer the recipient an internship in the summer.

- BP Egypt Public School Scholarship: established in 2005 to support an Egyptian student who has graduated from a public school in Egypt. Preference is given to an undergraduate student majoring in business administration. The student must maintain a GPA of not less than 3.5 during the course of study at AUC and having an outstanding Thanawiyya Amma score. The scholarship includes a summer internship at BP Egypt.

- Citibank Egypt Public School Scholarship: support is designated for students who have graduated from public schools in Egypt, and the students may receive an internship at the company.

- CITIGROUP Public School Scholarship: support is designated for students who have graduated from public schools in Egypt.

- Egyptian American Bank Public School Scholarship: established in 2003 and awarded

to an Egyptian public school student majoring in business administration or the humanities. EAB will offer the recipient an internship in the summer.

- Egyptian American Bank Public School Scholarship: established in 2005 to be awarded to a deserving Egyptian public school student.
- Lockheed Martin Public School Scholarship: established in 2004 to support deserving students who have graduated from public schools in Egypt.
- Mary Cross Public School Scholarship: supports one PSSF student scholarship for five years.
- Richard Morrow Public School Scholarship: supports the education of two public school students.
- Suad Hussein Juffali Scholarship: established in 2005 to provide financial support for four years to one deserving Palestinian student from Palestine and/or the Occupied Territories.
- Theodore Cross Public School Scholarship: supports the education of two public school students for up to five years each.
- Xerox Egypt S.A.E. Public School Scholarship: support is designated for Egyptian public school students who have graduated from a governorate outside Cairo and Alexandria.

Endowed scholarships and fellowships provide in perpetuity financial aid to deserving students. They are made possible by donations from many individuals, corporations and foundations committed to higher education in Egypt. These donations are placed in income-producing funds, with the income used every year to help support one or more student(s).

- Ahmed Arafa Public School Scholarship: established in April 2005 by Dr. Alaa Arafa in memory of his father, Major General Ahmed Arafa, to support deserving students from Egypt's public schools.
- ABB SUSA Scholarship: established in 1994 and awarded to a student majoring in construction engineering and who is also on the Dean's Honor List.
- Moataz Al-Alfi Scholarship: established in 1998 by AUC Trustee Moataz Al-Alfi. It is awarded to an undergraduate Egyptian student enrolled in marketing courses.
- American Chamber of Commerce Scholarship: established in 1991 and awarded to an Egyptian student majoring in business administration, management or economics, and based on academic merit and financial need.
- Armenian Evangelical Congregational Church of Cairo Scholarship Fund: established in 1999 through funds generated from the sale of the Armenian Church in Cairo. The scholarship is awarded to worthy graduate or undergraduate students of Armenian origin who are in need of financial assistance.
- AT&T Scholarship: established in 1987 and awarded to Egyptian students majoring in engineering or computer science.
- AUC Alumni Scholarships: established in 1983 by the International Alumni Council with collective gifts from AUC alumni in the Middle East, the United States, and Canada, and awarded to Egyptian and Arab children of AUC alumni.
- Bassam Jabr Public School Scholarship: established in 2001 and awarded yearly to an outstanding Egyptian student graduating from a public school on the basis of academic merit and financial need.
- Mohamed El Beledy Scholarship: established in 1985 by Dr. Mostafa El Beledy in memory of his father to support an Egyptian student demonstrating academic merit and financial need.

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- Bristol-Myers Squibb Scholarship: established in 1985 and later increased in 1989. It provides financial assistance to Egyptian students demonstrating academic merit and financial need.
- Bristol-Myers Squibb Egypt Scholarship: established in 1997 and awarded to students based on academic merit and financial need.
- British Petroleum Scholarship: established in 1990 and awarded to a senior student majoring in business administration and demonstrating academic excellence. Preference is given to students demonstrating financial need.
- David Vernon Bullough Scholarship: established by Mr. and Mrs. Bullough in memory of their son. It is awarded to Egyptian students demonstrating academic merit and financial need.
- Cairo Barclays Scholarship: established in 1987 and awarded to Egyptian students majoring in either business administration or computer science and demonstrating academic merit and financial need.
- Citibank Egypt Scholarship: established in 1985 and awarded to a junior or senior Egyptian student majoring in either business administration or computer science who demonstrates leadership qualities and academic standing.
- Colgate-Palmolive Scholarship: established in 1987 to provide financial support for an Egyptian student.
- DHL Egypt Scholarship: established in 1986 and awarded to an Egyptian student majoring in business administration. The recipient has the opportunity to intern at the DHL office in Cairo during the summer.
- Dow Chemical Scholarship: established in 1986 and awarded to Egyptian students majoring in either chemistry or engineering on the basis of financial need.
- Egyptian American Bank Scholarship: established in 1988 and awarded to a student majoring in business administration and demonstrating academic merit and financial need.
- Galal El Zorba Public School Scholarship: established in 2003 to support an outstanding student who has graduated from an Egyptian public school.
- Ghaleb El Farouki Scholarship: established in 1986 to support a Palestinian student who demonstrates financial need.
- General Electric Scholarship: established in 1984 to provide financial support for Egyptian students demonstrating academic merit and financial need.
- John and Marguerite Harbert Scholarship: established in 1985 by the late AUC Trustee John M. Harbert III and Mrs. Harbert and awarded to an Egyptian student.
- Alton and Barbara Harvill Scholarship: established in 1990 and awarded to an American student.
- Wafiya El Hassany Scholarships: established in 1976 by AUC alumna, Mrs. Wafiya El Hassany, and awarded on the basis of merit and need to one male Egyptian student and one female student, with priority given to Palestinian women.
- Douglas Horton Scholarship: established in 1985 by the Horton family and friends in memory of Mr. Douglas Horton who served as Chairman of the AUC Board of Trustees from 1944 to 1961. It provides financial support for an Egyptian student demonstrating academic merit and financial need.
- IBM Scholarship: established in 1990 to support Egyptian students.
- Johnson & Johnson Scholarship: established in 1990 and awarded to management students demonstrating academic merit and financial need.

- Thomas A. Lamont Scholarship: established in 1998 by the Board of Trustees and friends of Dr. Thomas Lamont in his memory. Dr. Lamont served AUC with distinction, both in his capacity as teacher and as senior administrator, from 1975 to 1998. The scholarship is offered to senior students majoring in English and Comparative Literature whose performance for the first three years demonstrates outstanding ability and excellent academic achievement.
- Dr. Akef El Maghraby Public School Scholarship: awarded to talented students in need of financial assistance.
- Mansour Group Fellowship (formerly MANTRAC): established in 1989 and awarded on a merit basis to a master's degree candidate in business administration.
- Ashraf Marwan Scholarship: established in 1995 and awarded to an Egyptian student demonstrating academic merit and financial need.
- R. D. Matthews Scholarship: established in 1986 in honor of the first four Americans who taught at AUC for a two-year term during the 1920's: Mr. Roderic Matthews, Mr. Ralph Douglas, Dr. Earl Moser, and Dr. Herbert Vandersall. It provides financial assistance to Egyptian students.
- Andrew W. Mellon Foundation Fellowships: established in 1999 and awarded to American graduate students enrolled in the Center for Arabic Study Abroad (CASA) program.
- Mahmoud Muftah Scholarship: established by INCOGUM in 1989 in memory of its marketing manager, Mahmoud Muftah. It is awarded to an Egyptian student majoring in business administration.
- Nadia Niazi Mostafa Fellowship in Islamic Art and Architecture: established in 2001 and awarded to a second year Egyptian student enrolled in the graduate program of the Arabic Studies department with a specialization in Islamic Art and Architecture based on academic merit and financial need.
- Simpson Scholarships for the Junior Year Abroad Program in Egyptology: the scholarship is awarded for academic achievement and provides five awards to juniors and seniors enrolled in the Year Abroad Program in Egyptology.
- Taher Family Scholarships: established in 2005 to support Palestinian students who reside in Palestine but who have met AUC's academic requirements, have enrolled in the University and demonstrate financial need. Preference is given to those who intend to return to Palestine after graduation or engage in some future occupation which would assist in the economic development of the area.
- Youssef Nabih Scholarship: established in 1986 to provide financial support for students who demonstrate academic merit and financial need.
- Youssef Nabih Scholarship in Accounting: established in 2004 to provide financial support for the graduating senior with the highest grade point average in the accounting department.
- Parents Association (PA) Scholarship: established by the 1997-1999 PA board to provide support for junior or senior students who face emergency situations and financial crisis during the course of their study at AUC.
- PepsiCo Scholarship: initially established in 1982 and later increased in 1991 to support an Egyptian student majoring in business administration or marketing on the basis of academic merit and financial need.
- Philip Morris Mansour Group Scholarship: awarded to students enrolled in the Center for Adult and Continuing Education (CACE) program who demonstrate academic merit and financial need.

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- P&G Scholarship: established in 1998 and awarded on a financial need basis.
- RAM Scholarship: established by an anonymous donor in 1984 and awarded to a Palestinian student majoring in engineering or computer science.
- Raytheon Scholarship: established in 1986 and awarded to an Egyptian student in the engineering department.
- Hayel Saeed Endowed Scholarship: established in 1994 by alumnus Hayel Saeed in commemoration of AUC's 75th anniversary. It is awarded to Egyptian students on the basis of academic merit and financial need.
- Hayel Saeed Scholarship: established in 2004 and awarded to students of Yemeni origin.
- Santa Fe International Scholarship: established in 1995 and awarded to Egyptian students majoring in the humanities or social sciences.
- Sasakawa Young Leaders Fellowships: established in 1992 to support graduate students in economics, public administration, the social sciences or the humanities.
- Dr. Abdel Hamid El Sawy Scholarship: established in 1984 by Dr. and Mrs. Abdel Hamid El Sawy, AUC alumni, to provide financial assistance to Muslim Egyptian students.
- Dr. Aboul Fetouh Shahine Scholarship: established in 1986 by Mohamed, Hussein and Hassan Shahine in memory of their father and awarded to Egyptian students.
- Shell Scholarship: established in 1995 and awarded to an Egyptian student demonstrating academic merit and financial need.
- Sheta Scholarship: established in 1982 by Mohamed and Mona Sheta, the parents of two AUC alumni, to provide financial assistance to Egyptian students.
- Georgiana Stevens Scholarship: established in 1982 by Mrs. Georgiana Stevens as a reflection of her deep interest in the Middle East and Cairo. It is awarded to Egyptian students.
- Stone & Webster Scholarship: established in 1985 to provide Egyptian students with financial support.
- Roger E. Tamraz Scholarship: established in 1981 by former AUC Trustee, Roger Tamraz, and awarded to an Egyptian student.
- Torgersen Scholarship: established in 1992 to provide financial assistance to Egyptian students in the sciences on a need basis.
- Warner-Lambert Scholarship: established in 1986 and awarded to students who demonstrate academic merit and financial need.
- Dr. and Mrs. A. Livingston Warnshuis Scholarship: established in 1987 in memory of Dr. and Mrs. A. Livingston and Ms. M. Chambers Warnshuis by family members to provide financial assistance to students demonstrating academic merit and financial need, with preference given to students from Africa and India.
- Xerox Egypt Scholarship: established in 1994 and awarded to Egyptian students.
- Xerox Foundation Scholarship: established in 1986 and later increased in 1991 to provide financial support for both Egyptian and foreign students.
- Yasmina Scholarship: established in 1989 and awarded to Egyptian students.
- John and Gail Gerhart Public School Scholarship Fund: established in 2002 in honor of Dr. John Gerhart, President of AUC from 1998-2002. Support is designated for students who have graduated from public schools in Egypt.
- Global Santa Fe Corporation Public School Scholarship: established in 2001 and awarded based on academic merit and financial need to outstanding engineering students who have graduated from Egyptian public schools.

Special Awards

Contributions from donors provide a number of endowed and annual awards. Eligible students may apply at the departments where these awards are offered.

- **Noreen Anwar Prize:** a cash prize awarded to the student with the best research paper in the Freshman Writing Program (FWP).
- **Mohamed El Beledy Academic Award:** a cash award presented at each commencement ceremony to the graduating senior with the highest grade-point average.
- **Beatrice and Roger Carlson Prize:** a cash prize awarded to a female student who has demonstrated academic excellence. The prize money is to be used for the purchase of books.
- **Tewfick Pasha Doss Award:** an annual award given alternately to the best graduate thesis in English and Comparative Literature and Political Science.
- **J. Duggan Memorial Fund:** the award is directed towards providing training and development for library staff.
- **Ahmed Fakhry Award in Egyptology:** a cash award presented to the most outstanding junior majoring in Egyptology.
- **Leila Fawaz Award in Arabic Studies:** established in 2005 to be awarded to the best paper written by undergraduate and graduate students in the Department of Arabic Studies that deal with Eastern Mediterranean History.
- **Abdulla Mohamed Lamloum Prize:** a cash award given to the highest-ranking graduating senior in economics.
- **Dr. Abdel Rahman El Sawy Award:** an award in the name of Dr. Abdel Rahman El Sawy presented twice a year at the commencement ceremonies to the graduating senior with the highest grade point average in the Engineering department and who has been a Public School Scholarship Fund (PSSF) scholarship recipient.
- **Madalyn Lamont Memorial Prize:** a cash award presented to students with an outstanding creative achievement in poetry, drama, fiction or essay-writing.
- **Ahmed El Mehallawi Family Award:** a cash award presented twice a year at each commencement ceremony to a graduating senior who has demonstrated excellent academic achievement and is enrolled in extracurricular activities that include community service.
- **Anand Mehta Award:** an award to support Egyptian students participating in Model United Nations (MUN) conferences abroad.
- **Magda Al-Nowaihi Award:** established in 2003 in memory of Magda Al-Nowaihi, an alumna of AUC (1978) and Associate Professor of Arabic Literature at Columbia University, and awarded yearly to an MA graduate whose thesis focuses on gender relations in any of the disciplines within the School of Humanities and Social Sciences.
- **Nadia Niazi Mostafa Award:** an award presented to the winner of the best thesis in the Islamic Art & Architecture program.
- **Naguib Mahfouz Medal for Literature:** established in 1997 to reflect the commitment of the AUC Press to bringing the best Arabic literature to the attention of the widest possible foreign audience. Awarded annually by the AUC Press on December 11, the date of Naguib Mahfouz's birthday, to the best contemporary novel published in Arabic. The award consists of a silver medal and a cash prize.
- **Parents Association Cup:** a cup awarded twice yearly at the commencement ceremonies to a graduating senior who demonstrates outstanding academic achievement as well as a major contribution to student activities.

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- Parents Association Excellence in Undergraduate Teaching Award: the winner is nominated by AUC faculty, alumni, parents, and students and is presented with a cash award in recognition of his or her excellence in undergraduate teaching.
- President's Cup: a cup awarded twice yearly at commencement to the student or students achieving the highest grade point average during their years of study at the University.
- Reda Salama Prize: two cash prizes awarded annually to the best literature and best science students in the Center for Adult and Continuing Education (CACE) Secondary-School Program.
- Samiha El Barkouky Award in Egyptology: to be awarded to an academically deserving graduating senior majoring in Egyptology who has a GPA of 3.3 or above.
- Frank G. Wisner Award for Scholarly Excellence: a cash award given annually to a graduate student who writes the best thesis on a topic related to modern Egypt.
- Dr. Hamed Kamal Eldin Award: a merit award in the name of the late Dr. Hamed Kamal Eldin for the best graduation project in the Professional Program in Project Management.
- Nadia Younes Award for Public and Humanitarian Service: established in 2004 in memory of Nadia Younes, to recognize the graduating senior who has exhibited the most commitment to community and humanitarian service.
- Ahmed H. Zewail Prize for Excellence: a cash award given twice yearly at commencement to an honors graduate whose academic accomplishments demonstrate extraordinary commitment to the pursuit of scientific inquiry and the affirmation of human values.

Zamalek Dormitory



ACADEMIC ORGANIZATION AND SUPPORT SERVICES

The academic programs of the American University in Cairo are offered by departments and institutes that are administratively housed in three schools. The academic area also includes research centers and support services units.

Academic Organization

Schools

School of Business, Economics and Communication

The School of Business, Economics and Communication consists of three departments, which offer the following programs:

1. Department of Economics

- Bachelor of arts in Economics
- Minor in Economics
- Master of arts in Economics
- Master of arts in Economics in International Development
- Economics Graduate Diploma in International Development

2. Department of Journalism and Mass Communication

- Bachelor of arts in Journalism and Mass Communication with specialization in Broadcast Journalism, Integrated Marketing Communication & Journalism
- Minor in Journalism and Mass Communication
- Master of arts in Journalism and Mass Communication
- Graduate Diploma in Television Journalism
- Non-degree training programs in Television Journalism

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3. *Department of Management*

- Bachelor of Accounting (BAC)
- Bachelor of Business Administration (BBA)
- Minor in Accounting
- Minor in Business Administration
- Minor in Information Systems
- Masters of Business Administration (MBA) with concentration in Accounting, Finance, Management, Management of Information Systems, Marketing and Operations Management
- Masters of Public Administration (MPA)
- Professional non-degree executive training, consulting, research and advisory services

School of Humanities and Social Sciences

The school of Humanities and Social Sciences consists of eight departments, two institutes and six programs, which offer the following programs:

1. *Department of Arabic Studies*

- Bachelor of arts in Arabic Studies with specialization in Arabic literature or in Middle Eastern History
- Minor in Arab and Islamic Civilization
- Minor in Arabic Literature
- Minor in Classical/Medieval Islamic History
- Minor in Islamic Art & Architecture
- Minor in Islamic Studies
- Master of arts in Arabic Studies with specializations in Islamic art and architecture, Arabic language and literature and Middle Eastern history
- Graduate diploma in Islamic Studies

2. *Department of English and Comparative Literature*

- Bachelor of arts in English and Comparative Literature
- Minor in English and Comparative Literature
- The Writing Program: Composition and Rhetoric
- Master of arts in English and Comparative Literature

3. *Department of History*

- Bachelor of arts in Modern History
- Minor in European-World History
- Minor in Modern History
- Minor in Modern Middle Eastern History
- Minor in United States History
- Undergraduate courses in Comparative Religion (CREL)
- Graduate credit courses

4. *Department of Law*

- LL.M. (Masters of Law) in International and Comparative Law
- Master of Arts in International Human Rights Law

5. *Department of Performing and Visual Arts*

- Bachelor of arts in Theatre
- Bachelor of arts in Art
- Minor in Art
- Minor in Film
- Minor in Music
- Minor in Theatre

6. *Department of Philosophy*

- Bachelor of arts in Philosophy
- Minor in Philosophy

7. *Department of Political Science*

- Bachelor of arts in Political Science with specialization in International Relations, Political Economy, Public & International Law or Middle East Politics
- Minor in International Relations
- Minor in Middle East Politics
- Minor in Political Economy
- Minor in Political Science
- Master of arts in Political Science with specialization in Comparative Politics, Professional Development or International Relations
- Graduate diploma in Political Science

8. *Department of Sociology, Anthropology, Psychology, and Egyptology*

- Bachelor of arts in Sociology
- Bachelor of arts in Anthropology
- Bachelor of arts in Psychology
- Bachelor of arts in Egyptology
- Minor in Anthropology
- Minor in Coptic Studies
- Minor in Development Studies
- Minor in Egyptology
- Minor in Psychology
- Minor in Sociology
- Master of arts in Sociology/Anthropology

9. *Arabic Language Institute*

- Non-degree intensive Arabic Language Instruction
- Arabic Language instruction for the Center for Arabic Study Abroad (CASA) program
- Courses in the Arabic language for undergraduate credit
- Master of arts in Teaching Arabic as a Foreign Language (TAFL)
- Graduate diploma in TAFL

10. *English Language Institute*

- Minor in Linguistics
- Intensive English Language Instruction to incoming undergraduate and graduate

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- students, who are non-native speakers of English
- Master of arts in Teaching English as a Foreign Language (TEFL)
- Graduate diploma in TEFL

11. *African Studies Program*

- Minor in African Studies

12. *American Studies Program*

- Minor in American Studies
- Graduate diploma in American Studies (to be launched in fall 2006)

13. *European Studies Program*

- Graduate diploma in European Studies

14. *Forced Migration & Refugee Studies Program*

- Graduate diploma in Forced Migration and Refugee Studies

15. *Gender Studies Program*

- Minor in Gender Studies

16. *Middle East Studies Program*

- Bachelor of arts in Middle East Studies
- Master of arts in Middle East Studies
- Graduate diploma in Middle East Studies

School of Sciences and Engineering

The school of Sciences and Engineering consists of eight departments and one program, which offer the following programs:

1. *Department of Biology*

- Bachelor of science in Biology
- Minor in Biology
- Minor in Environmental Science

2. *Department of Chemistry*

- Bachelor of science in Chemistry, with a Specialization in Clinical Chemistry & in Industrial Chemistry
- Minor in Chemistry
- Minor in Archaeological Chemistry
- General Science Courses (SCI)

3. *Department of Computer Science*

- Bachelor of science in Computer Science

- Minor in Computer Science
 - Master of science in Computer Science
 - Graduate diploma in Computer Science
- 4. *Department of Construction Engineering***
- Bachelor of science in Construction Engineering
 - Minor in Architectural Design
- 5. *Department of Electronics Engineering***
- Bachelor of science in Electronics Engineering
- 6. *Department of Mathematics***
- Bachelor of science in Mathematics, with an option in Statistics & Data Analysis
 - Bachelor of science in Actuarial Science
 - Minor in Mathematics
 - Minor in Applied Probability and Statistics
- 7. *Department of Mechanical Engineering***
- Bachelor of science in Mechanical Engineering, with specializations in materials and manufacturing, design and industrial engineering
- 8. *Department of Physics***
- Bachelor of science in Physics, with an option in Instrumentation
 - Minor in Physics
 - Minor in Electronics
 - Master of science in Physics
 - Graduate diploma in Physics
- 9. *Interdisciplinary Engineering Programs***
- Undergraduate general Engineering courses (ENGR)
 - Master of Science in Engineering, with options in Construction Engineering, Design, Environmental Engineering, Industrial Engineering, and Materials and Manufacturing
 - Graduate Diploma in Engineering
 - Training programs for practicing Engineers

Research Centers

The university has the following research centers. For more details, see section on Research.

1. *Social Research Center*
2. *Desert Development Center*
3. *Arabic Studies Bio-bibliographical Research Unit*
4. *Institute for Gender & Women's Studies*
5. *Prince Alwaleed Bin Talal Bin Abdulaziz Alsaud Center for American Studies and Research*

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Research Support Offices

The university supports research through the following offices. For more details, see section on Research.

1. *Office of Graduate Studies and Research*
2. *Office of Sponsored Programs*
3. *Office of African Studies*

Academic Support Services

Libraries and Learning Technologies

Dean: S. El Sawy

Associate Dean: R. Johnston

AUC Libraries and Learning Technologies consists of the Libraries (Main Library, and the Rare Books and Special Collections Library), Academic Computing Services, Center for Learning and Teaching, Classroom Technologies and Media Services and Web Communications.

Main Library

Directors: L. Eid, J. Spencer, L. Tweddle, H. Yaghmour.

Senior Librarians: A. Armstrong, N. Brown, K. Bussert, H. Chan, R. Dougherty, R.M. Johnston, H. El Ridi, C. Rueby, N. Sidawy, N. Youssif

The mission of the AUC Library is to support the instructional and research needs of the AUC community. The Library provides the academic community with one of the largest English language research collections in Egypt. Using the Library of Congress classification system, open stacks and a fully automated catalog system, the Library provides approximately 348,000 volumes and over 1,600 current periodical subscriptions. Over 70 databases provide online access to thousands of additional periodicals, many in full text. Faculty and students are able to access databases and information about the collections and services while in the Library, on campus, or from home. With approximately 90 public access computers currently available, we provide laptops and wireless technology for use in the Library. The Library is a member of OCLC, Research Libraries Group (RLG) member and a SHARES participant. The use of Ariel enhances the speed of document delivery from abroad. In addition to the required one hour course for Freshmen, library instruction is offered in all fields to students, faculty, staff and visitors.

AUC Libraries are accessible online at: <http://library.aucegypt.edu/>

Rare Books & Special Collections Library & University Archives

Director: P. Croom

University Archivist: S. Urgola

Senior Librarian: F. Marei

Assistant Director for RBSCS Services: D. Abdel Razek

The Rare Books and Special Collections Library was inaugurated in the spring of 1992 in a restored turn-of-the century villa on Sheikh Riham Street. As a branch of the AUC Library, it operates as a scholarly research facility and a teaching resource center specializing in the civilizations of ancient, medieval, and Modern Egypt and the region. The current holdings of over 30,000 books and extensive collections of manuscripts, photographs, slides, maps and plans attract researchers from around the world. The Rare Books and Special Collections Library also houses the AUC archives. The special collections include the Creswell Library of Islamic Art and Architecture, and the collections of Max Debbane, Selim Hassan, Labib Habachi, Mahmoud Saba, and most recently of Hassan Fathy, Wissa Wassef and Van Leo.

The Rare Books and Special Collections Library is available online at:
<http://lib.aucegypt.edu/screens/rbscl.html>

Academic Computing Services

Director: M. Kaddah

Associate Director: S. el Kassas (Acting)

Academic Computing Services (ACS) provides computer services to all AUC faculty, researchers and students. Services include providing necessary computing facilities, management of public-access computer labs, technical support and training, software installation and trouble-shooting, web development, and support for the use of computing technology in instructional programs. ACS also provides a range of R&D support services including technology tracking and specialized training and consulting. ACS offers workshops and seminars to faculty, staff and students on a regular basis.

Academic Computing Services is available online at: <http://acs.aucegypt.edu>

Center for Learning and Teaching

Director: A. Ellozy

Associate Director: P. Glavanis

The main role of the newly established CLT is to promote excellence in teaching including the effective application of technology to the teaching/learning process. The CLT supports the faculty in their efforts to enhance the quality of their instruction through a variety of programs, services, workshops and lectures. It also coordinates its

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activities with Academic Computing Services, Classroom Technologies and Media Services and the Library.

Center for Learning and Teaching is available online at: <http://clt.aucegypt.edu>

Classroom Technologies and Media Services

Director: M. S. Allen

Assistant Director: S. Washi

Classroom Technologies and Media Services provide media and instructional technology support to all academic departments of the University. The department provides necessary equipment and maintains a collection of non-print materials, including films, and audio and videocassettes. It also maintains two computer classrooms, two video conferencing rooms and eight smart classrooms. Technical assistance and training in the use of media is available to all faculty and students.

AUC Media Services is available online at: <http://lib.aucegypt.edu/screens/media.html>

Web Communications

Director: K. Coffield

The mission of Web Communications is to strengthen the university's web presence, particularly at top levels of the site, and to increase global awareness among prospective students and other audiences essential to AUC's academic mission. Focus is on the institutional web as a primary communications and information medium, particularly among internationals, supporting recruitment and enabling academic units to share information and activities worldwide. In coordination with Academic Computing Services and other units, Web Communications engages in strategic planning and provides guidelines and resources for site development by academic programs and administrative offices.

AUC's website is available at: <http://www.aucegypt.edu/>

University Computing

Associate Vice President for Computing: M.S.Akabawi

The central computing organization is headed by the associate vice president for computing and reports to the Provost. Under his direct jurisdiction are two technical offices: the Network Security Office and the Planning and Control Office. The Network Security Officer is responsible for developing campus-wide policies and overseeing their implementation in addition to developing, on a periodic basis, campus-wide risk assessment and business continuity plans/Disaster Recovery Plans (DRP). The office also administers the university firewall and the Virtual Private (VPN) facility for selected users. The Planning and Control officer is responsible for the development and update of

the strategic ICT plan for university network services, administrative computing services and telecommunication.

The central computing organization is composed of three units, each headed by a Director or Acting Director.

Administrative Computing Services

Director: Alaa Ramadan

The mission of the Administrative Computing Services unit (AdCS) is to maintain AUC's critical applications for the AUC administration. These include application development, technical resources management and designing and implementing computer literacy and training programs for all staff.

AdCS has installed and currently supports over sixty software products resulting in an automated information system utilized in most major administrative areas. These include:

Financial System (CUFS), Student information System (SIS-PLUS), Human Resource System (HRS), Fund Raising and Alumni (FUNDAL) and Office Automation (OA) applications. A host of front-end web enabled interfaces interacts with these legacy systems to provide on-line e-service facility to the community (students, faculty, staff and administration).

A Storage Area Network (SAN) infrastructure has been installed to serve applications and to act as a centralized storage repository for any application's data storage eg. e-mail.

University Network Services

Acting Director: M.S.Akabawi

Associate Director: Khaled Hilal

The University Network Services (UNS) unit is responsible for the planning, design, development, operation and management of the campus-wide data communications network. The campus network is based on a gigabit backbone with 4,700 switched 10/100 mbps access ports distributed in all campus buildings and satellite locations (Maadi, Zamalek, Heliopolis and Cairo Center building). The network infrastructure is built to accommodate up to 7,000 ports. UNS actively monitors and manages the network through management and monitoring tools to proactively detect problems and attend to them. UNS also provides e-mail services for up to 10,000 mailboxes. E-mail accounts are granted to all staff, faculty, students and alumni. Alumni, tenured faculty and staff are given life-long accounts.

UNS activities include: providing direct access to all computing resources and information servers inside and outside the university, enabling the use of various distributed computing environments within the schools and research centers, configuring and installing the suitable communications/networking software suite on the university wide

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workstations, offering technical support in the area of network configuration, trouble shooting and correction, providing all data communication activities within AUC, including on campus, off campus, and remote dial-in services, offering network consulting services for network design, installation, and management of the university constituency, providing physical connectivity and cable installation through its specialized staff; and coordinating, hosting and maintaining the university links to the Worldwide Internet.

The UNS is considered to be the first point of contact for the AUC community for any network access needs, queries and problems, local or remote.

Telecommunication Operation

Assistant Director: Ali Reda

The telecommunication area is responsible for planning, designing, developing and operating the university-wide telephone system and all the PBXs in AUC buildings. The activities include designing of voice infrastructure network, management of telephone operators, and supervision of installed radio base station (RBS).

IP telephony is currently replacing the aging PBXs in a phased manner, enabling faster and less expensive communication with AUC New York office and AUC satellite buildings in Zamalek, Maadi and Heliopolis.

The American University in Cairo Press

Director: Mark Linz

Established in 1960 and reorganized in 1984, the AUC Press has become the region's foremost English-language publishing house. Its goals and purposes reflect and support AUC's mission in education, research, and cultural exchange through professional publishing, and bookselling services.

Publishing Programs

AUC's publishing house is rapidly expanding its programs of high quality scholarly, literary, and general interest publications on Egypt and the Middle East, publishing up to 65 new books each year and maintaining a backlist of some 600 titles for worldwide distribution. The Press is the primary English-language publisher and the worldwide agent of Nobel Laureate Naguib Mahfouz, and presents the annual Naguib Mahfouz Medal for Literature to support modern Arabic literature in translation. An Endowment fund for Scholarly Books and Translations of Arabic Literature was established in 2000.

Bookselling Services

The AUC Bookstores supply the university's textbooks and provide Cairo's English-language community with AUC Press books and with a wide variety of other books on Egypt and the Middle East, as well as modern fiction and general nonfiction, guides and gift books.

Career Advising and Placement Services

Director: Maha Guindi

Associate Director: Maha Fakhry

The office of Career Advising and Placement Services (CAPS) is committed to provide quality service to students, alumni and employers in the areas of career planning and employment through a centralized comprehensive program.

CAPS educates students and alumni for life-long career planning. Assistance is provided in identifying career objectives, designing and implementing job search strategies, as well as exploring experiential learning, employment, and post-graduate opportunities.

The office fosters collaborative relationships with faculty, employers and the professional community at large to enhance a mutually beneficial relationship between our constituents. CAPS supports employers' endeavors, primarily in Egypt and the Middle East, in recruiting potential candidates for employment.

CAPS maintains equal opportunity compliance and follows affirmative action principles in conducting its services.

Career Advising

The program is designed to support the career planning endeavors of AUC students and alumni in individual and group settings through the following services:

- *Individual Career Advising:* Career advisors are available to counsel students and alumni on career related matters. Advisors assist in identifying different career options and support students in making occupational choices that are compatible with their skills and interests. Peer Career Advisors provide assistance in the areas of resume writing and interviewing.
- *Self-Assessment:* Students are encouraged to develop a better understanding of their personality types, interests, skills, and values to help them take well-informed career decisions. The self-assessment process is enhanced by the use of specialized inventories, such as The Myers Briggs Type Indicator (MBTI) and the Strong Interest Inventory (SII); both instruments are administered and interpreted by qualified professionals.
- *Career Development Workshops*
Each semester, CAPS conducts a series of workshops which are designed to provide students with the job search skills required for marketing their qualifications to employers. Topics covered include career planning, high impact resumes, job search strategies, power interviewing and your path to graduate study.

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Career Exploration

To land satisfactory employment, students are encouraged to research their occupational interests, career options, and employers' information; in addition to acquiring hands-on experience that complements their academic background.

- *Career Resources Library:* To support students' career planning endeavors, CAPS career library hosts a wide variety of general career-related resources and corporate-specific recruiting materials.
- *Career Mart:* In the spring, AUC hosts an annual Career Mart, which allows students to meet with professionals from a variety of disciplines in an informal setting and explore various career fields and relevant career opportunities.
- *Summer Internship Program:* CAPS organizes a summer internship program through which AUC students gain valuable work experience during the summer vacation. Students apply to the announced internships.
- *Job Shadowing Program:* CAPS helps students explore their career as early as their freshman year. Job Shadowing allows students to shadow a business professional in their field of interest for one or two days to see what a daily routine of that career is really like.

Placement Services

Throughout the year, the placement program provides an interactive communication channel between AUC graduating students/alumni and employers seeking qualified job candidates. The program includes:

- *Employment Fairs:* Twice a year, AUC hosts local, national and multinational employers in an informal one-day recruiting event in order to promote a productive exchange of career information between employers' representatives and AUC students and alumni seeking professional employment. Details on participating companies and available vacancies are published in an Employment Fair booklet.
- *Vacancy Announcements:* The office publishes a weekly e-jobs bulletin that communicates current employment opportunities to alumni subscribers via e-mail. Hard copies are posted weekly on CAPS bulletin boards.
- *Resume Referral Service:* The office maintains a resume data bank for alumni engaged in the job search process. The data bank is utilized to refer to the employer the resumes of interested applicants whose qualifications match the company's requests.
- *On-Campus Corporate Visits:* To facilitate the interaction between students and employers, CAPS coordinates on-campus company recruiting visits which include corporate presentations, case study seminars and interviews.

For further information on CAPS programs and dates of career-related events, refer to CAPS website: www.caps.aucegypt.edu

Office of Equal Opportunity and Affirmative Action

Director: Iman El-Kaffass

Associate Director: Sherifa El Tabel

Equal Opportunity & Affirmative Action of the AUC (EOAA) is the embodiment of the American University in Cairo's commitment to the value of equality and an environment free of harassment and discrimination.

The EOAA helps facilitate the development of students who respect the rights of others, diversity, and multiculturalism. Through training, joint events and activities, we provide students with the life-skills that effectively help establish their future identities, and assist them in their contribution to attitude changes in Egypt. EOAA helps prepare the students for challenging careers in national and multinational organizations that operate in a dynamic, diverse and multicultural global village.

Accomplishing the above, EOAA holds regular training sessions, seminars and symposiums on a variety of topics such as: integrating the disabled or the challenged, cultural sensitivity training, managing diversity, women's issues, saying no to harassment including sexual harassment, what discrimination does to people, the societal integration of the aged and many more. EOAA also hosts several cultural oriented events that emphasize diversity and equality. Activities furthermore aim to link students to different entities working in these fields. Over and above that, EOAA has its own publication called Linkage (which is also available online) and a multimedia library that includes books, journals, videos about gender, diversity, equality, equal opportunity laws and practice.

EOAA also has a preventive and prescriptive role, helping prevent harassment and discrimination at AUC as well as promote awareness of these issues outside the premises to the larger community.

The office advises, counsels and educates all AUCians (students, faculty and staff) about their legal rights and responsibilities. When and if harassment or discrimination takes place, EOAA mediates or investigates such incidents, and takes measures to ensure that such incidents do not recur.

EOAA is the custodian of the University Policy on Equal Opportunity and Affirmative Action and its Policy on Sexual Harassment that are applicable to all AUCians (students, faculty and staff).

For more information, visit our website:

<http://aucadmin.aucegypt.edu/affirmative>

or affirmative.aucegypt.edu

If you have any question or concern, please contact us at (+202) 797 5544

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International & Special Academic Programs

Assistant Provost for International Programs: J. Swanson

AUC's Office of International and Special Academic Programs is charged with several tasks. It reviews and maintains administrative oversight with regard to agreements between AUC and external institutions; it monitors academic programs for foreign undergraduate students on campus; it coordinates among the various on-campus bodies and groups that are responsible for these programs; and it assists the Director of Graduate Studies in matters that relate to the needs of foreign graduate students at AUC. The Office of International and Special Academic Programs often provides support and coordination for special lecture series, and programs organized by AUC's faculty.

Among the responsibilities of the Office of International and Special Academic Programs is that of arranging and organizing special academic programs for visiting groups—a responsibility that is shared with the University's Center for Adult and Continuing Education. Many universities and other agencies in the United States organize academically-oriented programs of their own in Egypt, either regularly or on occasion. AUC actively facilitates such programs, whether during the academic year or in the summer sessions. AUC assistance ranges from conducting entire academic and travel programs to joint programs with provision for local administrative services. In recent years such study programs have included Middle East curriculum development, Egyptian or Middle East study tours, and other activities for or with the National Council on U.S.-Arab Relations; the U.S. Department of Education; Smithsonian Associates; International Study Tours, N.Y. (Elderhostel); and St. Olaf, Drew, Birmingham Southern, and other colleges and universities. AUC plans such programs both for students and for faculty development at university and secondary levels. Universities and other institutions interested in AUC assistance should contact Dr. J. Swanson through the New York Office at:

The American University in Cairo
420 Fifth Avenue
New York, N.Y. 10018-2729
U.S.A.
Fax: New York (212) 730-8800
E-mail: aucegypt@aucnyo.edu

A sepia-toned photograph of a courtyard. In the background, a building with a large central window and two smaller windows on either side. Several students are sitting on the steps in front of the building. In the foreground, there is a central fountain with a tiered base and a lantern-like top. The fountain is surrounded by a decorative mosaic floor. The text "UNDERGRADUATE STUDIES" is overlaid in the center of the image.

UNDERGRADUATE STUDIES

ADMISSIONS

Admission Policy and Procedures

The American University in Cairo admits undergraduate and graduate degree-seeking applicants for the fall and spring semesters. The university welcomes the applications of Arabic Language Institute, Study Abroad and non-degree applicants for the summer session, as well as the fall, spring and winter semesters.

The university, in keeping with the long-standing protocol with the Egyptian government, maintains an enrollment of undergraduate degree-seeking students that is at least seventy-five percent Egyptian. Accordingly, AUC establishes quotas regarding the offer of admission and enrollment of non-Egyptian students.

Applicants may apply for admission up to one year in advance of their anticipated date of first enrollment. The University reviews completed admission applications on a rolling basis. AUC cannot determine the admissibility of candidates with incomplete applications.

The university and the Egyptian Ministry of Education require that all students entering AUC undergraduate program complete a minimum of eleven years of primary and secondary education prior to enrollment in university courses. Applicants must provide proof, in the form of a first-year primary certificate or Idadia Certificate followed by three years of study as proof that they have completed at least eleven years of education.

All undergraduate degree-seeking admission applicants are required to submit official secondary school academic transcripts, mark sheets, and/or certificates. Applicants who have attempted post-secondary studies must also submit official academic transcripts, mark sheets, and/or certificates from each post-secondary school attended regardless of whether they have earned credit or seek transfer credit. All academic records not in English or Arabic must be accompanied by certified English translations.

All undergraduate degree applicants must demonstrate proficiency in English by submitting recent AUC English Language Proficiency Entrance Test (ELPET), TOEFL and/or SAT results, or completed college-level English coursework. Non-Egyptian applicants and/or their sponsors must provide official evidence indicating that a minimum of \$16,000 is available to cover the tuition, fees, travel, and living expenses for the first year of study at the University.

Academic Preparation

The University seeks highly qualified applicants who complete the most demanding courses available in secondary school. Excellent grades in honors classes indicate the applicant's ability and willingness to meet the academic challenges of university study. The University's most capable first-year applicants have achieved excellent grades while completing a well-balanced university preparatory program.

In addition, AUC considers the personal qualities of applicants—how well they have taken advantage of available resources, whether they have faced and withstood unusual adversity, and the extent to which they show promise as a contributing member of the AUC community. The University also considers applicants' personal achievements outside the classroom as demonstrated by sustained participation, commitment, and leadership in school and community activities.

Early Admission

AUC considers the most academically qualified fall applicants for Early Conditional Admission. This offer is extended in the spring of the final year of secondary study. The current Undergraduate Admission Application booklet lists the specific requirements for Early Admission. The information is also available on the World Wide Web at: <http://www.aucegypt.edu/admission>

Applicants offered Early Conditional Admission must complete all secondary school graduation requirements, achieve a level of academic performance comparable with the performance on which the offer of admission was based, and submit satisfactory TOEFL/ELPET scores and all required documents prior to enrolling in the University. In addition, those currently enrolled in post-secondary studies must successfully complete those courses and provide the University with final official records. If the final academic results are not comparable to those on which the offer of Early Conditional Admission was based, the University reserves the right to withdraw the offer of admission.

English Language Proficiency

All new undergraduate students who apply as degree students and non-degree students must provide evidence of academic English proficiency with the admission application. The University does not exempt applicants from this requirement solely on the basis of citizenship or graduation from an English-medium secondary school.

Applicants that satisfy one or more of the following criteria qualify for exemption:

- Satisfactory scores on appropriate standardized tests including the SAT, the ACT and College Board Advanced Placement tests
- Successful completion of one or more non-remedial, university level English courses
- Successful completion of English-medium secondary school coursework and examinations that qualify for advanced placement including the International

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Baccalaureate Diploma Program, the 13th year of Canadian education and the GCE A-Level Certificate in English

- Recent TOEFL scores are required of an applicant who does not attend an English Language university or who has attended less than three semesters at a university where the language of instruction is English

Students in the following programs are exempt from the English language proficiency requirement:

- Study abroad applicants from English-medium universities
- Center for Arabic Study Abroad (CASA) students
- Arabic Language Institute (ALI) students. While the submission of English proficiency test results are not required, you must be able to read and write in English to study at the Arabic Language Institute.

Applicants not exempted must submit recent official test results from the AUC English Language Proficiency Entrance Test (ELPET) and/or the Test of English as a Foreign Language (TOEFL). Tests must be completed no more than one year prior to the first day of the term for which applicants are applying for admission. Applicants cannot take the ELPET more than once every six months.

The University determines English Language placement using applicants' highest score on either or both the ELPET and the TOEFL. AUC may offer applicants that do not qualify for the Writing Program the opportunity to enroll in AUC's Intensive English Program (IEP) or Academic English for Freshmen (ENGL 100). ENGL 100 is the University's bridge course between the IEP and the Writing Program. IEP students must complete the program in one calendar year (two semesters and the summer session). ENGL 100 students must complete the course within two semesters.

Declaration of Major from the gate

(see Academic Regulations section)

The Admission Decision

The most important criterion for admission to AUC is demonstrated sustained academic achievement. The undergraduate admission application review process at the University requires evidence of successful completion of an accredited secondary school program, as well as success in collegiate studies (if applicants have enrolled in a post-secondary program). The quality of work, appropriateness of program, and academic standing among peers are also important considerations. Applicants who have selected a rigorous academic program and who have achieved distinction in a range of academic courses are the most likely candidates to receive an offer of admission.

The University's most qualified candidates have earned excellent grades in their courses. However, the University noticed that from time to time students with lower

grade averages and/or test scores perform better than those with higher grades or scores. Because of this, when determining admission, the University considers a combination of factors including academic program, grades and test scores, as well as geographic origin, and participation in extracurricular activities. The vast majority of those applying to AUC are capable of succeeding scholastically at the University. Many more academically qualified students apply for admission than there is room available. The University's task is not simply to select those who are qualified, but to identify those who have distinguished themselves. Applications submitted beyond the deadline dates will be considered pending space availability only.

Admission to an Undergraduate Degree Program

Admission applicants must submit all required application materials to be considered for admission. The current Undergraduate Admission Application booklet lists the specific documents that applicants must submit to complete the application. The information is also available on the World Wide Web at:

www.aucegypt.edu/admission

Minimum requirements for first-year applicants: AUC's minimum requirements for first-year applicants vary by the type of secondary program. Because of the large number of qualified applicants, those offered admission generally score well above the following minimums:

- Egyptian Thanawiya Amma—Arts, or Science (General Secondary School Certificate). Submit the results of both the first sitting (completed at the end of the tenth year) and the final sitting (completed at the end of the eleventh year) of the Thanawiya Amma. Applicants must earn at least 70 percent on the final sitting to be considered for admission.
- Thanawiya Amma from Arab countries—Arts, or Science (General Secondary School Certificate). Submit the results of both the first and the final sitting of the Thanawiya Amma. Applicants must earn at least 75 percent on the final sitting to be considered for admission.
- British Certificate: Submit **eight** GCE/GCSE/IGCSE subjects. Applicants who have completed Advanced/Advanced Supplementary level subjects and have earned excellent grades are given preference. Grades 'A to C' are accepted at the Ordinary and Advanced Supplementary levels. Grade 'D' is accepted at the Advanced level only. Subjects completed at the Advanced and Advanced Supplementary level are not double counted. Applicants must submit all certificates to the University. However, AUC utilizes only the best eight subjects during the admission evaluation process.
- American High School. Complete a college preparatory program of courses with at least a 2.0 (on a four-point scale) grade point average in academic courses. The estimated SAT-I composite cut-off score for Fall 2004 and spring 2005 is 900 or comparable ACT scores. Students are encouraged to complete a well balanced

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university preparatory program that includes:

- Three years of mathematics including algebra, geometry and trigonometry.
- Two years of a second modern language.
- Two years of a laboratory science.
- Three years of social sciences.
- One year of fine arts course work and training.
- A program of physical and health education.

Applicants who have attended an accredited high school for less than three semesters must also submit official results in SAT-II in two subjects with a total score of 1100 and a minimum score of 500 on each subject.

Students who have taken Advanced Placement (AP) courses and exams (results issued by the College Board) may be granted transfer credit.

- International Baccalaureate. Complete the International Baccalaureate Diploma program.
- Zeugnis der Allgemeinen Hochschulreife (German Secondary Certificate). Complete Gymnasium or high school and submit Abitur results. The academic average is a minimum of four.
- Baccalaureate de l'Enseignement Secondaire (French Secondary School series L, S or ES). Complete the French Baccalaureate with an academic average of at least passable.
- Canadian certificates.
- Other Programs and Certificates—complete a rigorous university preparatory secondary education program.

Transfer Admission

Applicants who have attempted post-secondary school studies of an advanced-level subjects or at a university level during or following their secondary school program are transfer applicants. These students are classified as follows:

Lower Division Transfer Student (LDTS)

A lower division transfer student is an applicant with less than 60 transferable units. A transfer applicant will be held to the same standards as a "first time freshman." In addition, applicants must be in good academic standing at all previously attended universities and have an overall university grade point average (GPA) of 2.0 or higher. Admission is based on the available places and the student academic performance.

Upper Division Transfer Student (UDTS)

An upper division transfer student is an applicant who is evaluated at the admission stage to have 60 or more eligible credits for transfer consideration. However, beyond

the admissions stage, the number of transfer credit that will be granted to this applicant will be subject to the academic department's evaluation and decision. Applicants in this category must have a 2.00 average or higher in all transferable college course work in order to be admitted. Although each applicant in this category is required to have earned a secondary school certificate, the grade point average (GPA) of this certificate will not be considered a factor in the admissions process.

A transfer student is not guaranteed acceptance into his/her current major. Admission to the same major is ultimately decided upon by the School Dean.

Transfer Credit Award

The University awards transfer credit for coursework completed at post secondary institution and/or advanced level subjects completed within the certificates mentioned below. Transfer credit is granted for coursework that is comparable in nature, scope, content, and depth; in addition to the appropriateness and applicability of the credit earned to the courses at AUC. The University awards transfer credit to two categories of students:

1. Students who are transferring from accredited institutions and have taken courses at the university level. The university awards transfer credit to students who complete coursework in fields of study that are comparable to those offered by AUC, with a minimum grade of "C" from institutions operating in the USA, a minimum grade of "Good" from the National Universities of Egypt, and equivalent grade to a "C" (at AUC) from other institutions. The determination of transfer credit award occurs following the submission of an official academic transcript, the university catalog, as well as required course-related materials. Studies completed more than five years prior to matriculation into the university are not transferable. Internships, Occupational, vocational, remedial coursework, and studies classified as less than first-year (Freshman) level by the sending institution or AUC are not transferable. Credits earned to satisfy the requirements of a previous degree are not considered for transfer credit.

The transferable coursework must have been completed at Post secondary institutions that are accredited by one of the following six "Regional Accrediting Organizations" in the United States:

- Middle States Association of Colleges and Schools, Commission on Higher Education
- New England Association of Schools and Colleges, Commission on Institutions of Higher Education
- North Central Association of Colleges and Schools, the Higher Learning Commission
- Northwest Commission on Colleges and Universities
- Southern Association of Colleges and Schools, Commission on Colleges
- Western Association of Schools and Colleges, Commission for Senior Colleges and Universities

or at Institutions that are recognized by the Ministry of Higher Education, and/or the Supreme Council of Universities, depending on the country in which the institution is operating.

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2. Students who have completed collegiate-level studies with a grade that is comparable to at least a "B" at AUC.

The following is the policy applied in relation to the different certificates:

- ***International Baccalaureate Diploma***
The University grants 15 credits of lower-division general elective transfer credit for the completion of the IB Diploma with a minimum total points of 30. In addition, the University grants up to 15 transfer credits for higher level academic subjects with grades of five, six, or seven (out of seven). AUC does not grant transfer credit for subsidiary level subjects.
- ***The College Board Advanced Placement (AP) Examinations.***
The University grants transfer credits for academic subjects with scores of four or five (out of five).
- ***German Secondary School Certificate-Abitur***
The University grants up to 30 transfer credits for academic subjects with scores of ten or more (out of 15).
- ***French Baccalaureat II***
The University grants up to 30 transfer credits for academic subjects with advanced level scores of 14 or more (out of 20).
- ***British Certificates (GCE Advanced Level)***
The University grants transfer credits for A-level subjects with grades of "A" or "B". The University does not grant transfer credit for subjects completed at the AS, AO, or O' levels.
- ***Canadian certificates, College D'Enseignement General et Professionel (CEGEP) and the Ontario Secondary School Diploma (OSSD).***
The University grants up to 30 transfer credits for academic subjects completed at the higher level with grades of 70 percent or more. The University does not grant transfer credit in the absence of the CEGEP Diploma, or if the student completed fewer than six OAC subjects in the OSSD.

Transfer Credit After Matriculation

The University transfers a maximum of 36 hours of semester credit from other institutions after students enroll at AUC. The University awards a maximum of 12 credit hours for coursework completed in any one summer. (Students may not enroll in more than 12 credits in any one summer, AUC summer courses included.) The University transfers a maximum of nine credits for courses completed through correspondence and/or distance learning following matriculation. Students may not enroll in correspondence courses offered by other institutions during academic terms in which they are registered for courses at AUC.

Readmission

AUC students who withdraw from the University in good standing and subsequently wish to return after an absence of one or more semesters may apply for readmission. Readmission is offered on a space-available basis and is not guaranteed. The University does not consider TOEFL results for the purpose of placing readmission applicants in English. Selected applicants must submit recent AUC ELPET results with their readmission application.

English Level at Time of Withdrawal	Lapse of Time	ELPET Required
Successfully completed RHET 103	Less than 24 months	No
	More than 24 months	Yes
Enrolled in ENGL 100, or RHET 101, 102 or 103	Less than 6 months	No
	Between 6-12 months	Optional
Enrolled in IEP	Less than 6 months	No
Enrolled in IEP, ENGL 100, or RHET 101, 102 or 103	More than 12 months	Yes

Study Abroad/Non-Degree Admission

Degree-seeking students at other recognized institutions who wish to augment their education by enrolling for a period of time at the American University in Cairo are invited to apply for admission as visiting Study Abroad/Non-Degree students. Such students pay regular AUC fees in U.S. dollars.

Since AUC is both a US-accredited institution, and one recognized by the Ministry of Higher Education in Egypt, students from most universities around the world are able to transfer credits earned at AUC to their home institutions.

Study Abroad/Non-Degree applicants must submit application materials that include post-secondary school transcripts, letters of reference, and a study plan approved by their home university to AUC's New York office. The current Study Abroad/ Non-Degree Application Booklet lists application deadlines and the specific documents that applicants must submit to complete their application. The information is also available on the AUC website at: www.aucegypt.edu/admissions

Change of Status from Non-Degree to Degree

Upon request, the university may approve a change of status from Non-Degree to degree seeking. The student should file an undergraduate application in the Admission

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office and submit all the relevant documents. Courses taken in undergraduate non-degree status are then transferred to the degree record and all grades are considered when calculating the grade point average.

Auditors

Individuals who wish to attend individual classes without credit may apply as auditors. Auditors are not eligible to sit for final examinations, receive academic credit, or enrollment certification from the University. Permission to audit is granted on a space-available basis. Auditors generally enroll during the late registration period after other students have had an opportunity to register. Auditors are not allowed to enroll in language courses.

The Arabic Language Institute

The Arabic Language Institute is one of the most respected Arabic language study programs in the world. The Institute offers intensive programs beginning three times each year that range in length from eight weeks to one or more years. The Institute's world-class faculty teaches classes in Modern Standard Arabic, Classical Arabic, and Egyptian Colloquial Arabic at the elementary, intermediate, and advanced levels. The Institute's programs culminate in certificates of achievement recognized around the world.

Arabic Language Institute applicants submit completed application forms, as well as other materials specified in the current Undergraduate Admission Application booklet. The information is also available on the World Wide Web at:
<http://www.aucegypt.edu/students/>

Due to the limited number of spaces in the Arabic Language Institute Program, accepted students will be registered by the order in which payment of full tuition is received.

Arabic Language Placement

Applicants that are citizens of or permanent residents in Arab countries, and that have completed the Thanawiya Amma, the Tawjihi or passed the Egyptian Ministry of Education-approved Arabic examination or IGCSE students who achieved a minimum of "C" grade in the "Arabic First Language" extended subject are not required to take AUC's Arabic language placement test. Information about the test is available at the AUC Arabic Language Unit.

A sepia-toned photograph of a courtyard. In the foreground, there is a central fountain with a tiered, octagonal base and a small, domed lantern on top. The fountain is surrounded by a circular, geometric pattern of tiles. In the background, a large, ornate building with a central arched doorway and smaller windows on either side is visible. Several people are sitting on the steps leading up to the building. The overall scene is peaceful and academic.

ACADEMIC REQUIREMENTS & REGULATIONS

ACADEMIC REQUIREMENTS & REGULATIONS

Academic requirements and regulations govern the relationship between the university and its students. Students must complete the general academic requirements described below as well as those listed under an individual degree program in order to obtain an academic degree.

The academic regulations described in this section are effective at the time of publication. The university reserves the right to modify them, in which case changes will be announced when necessary. The student is responsible for being aware of all academic requirements and regulations. These can only be waived by action of the university, as appropriate. Current university regulations apply regardless of the regulations in effect at the time a student entered the university, except where current regulations specifically state the contrary.

Undergraduate Academic Requirements

The general academic requirements apply to all students working toward a bachelor of arts or bachelor of science degree. These requirements reflect the university's effort to bridge two cultures. Thus the university requires a high concentration of courses in its undergraduate majors, a characteristic of Egyptian education, while at the same time requiring a core of general education, the approach taken by institutions in the United States. The main components of AUC's undergraduate programs are:

1. A Core Curriculum: foundation of general education in the natural sciences, social sciences, and humanities.
2. Arabic language requirements.
3. Concentrations: subjects in which students concentrate their studies and receive degrees.
4. Collaterals: subjects in supporting disciplines specified by the department of major.
5. Minors: subjects which students may, if they wish, study beyond the introductory level.
6. Electives: courses chosen by students in consultation with their advisers.

Residence

To obtain a bachelor's degree a student must take at least 45 credit hours of courses in residence at the American University in Cairo. At least 30 of the 45 hours must be in courses at the 300 and 400 levels; with a stipulation that no more than 15 transfer credits in 300-400 level courses, will satisfy concentration requirement of any program. The maximum credit to be considered for each program is as follows:

1. A maximum of 15 transfer credit hours in the 300-400 level courses in programs offered by the School of Business, Economics, and Communication.
2. A maximum of 15 transfer credit hours in the 300-400 level courses in programs offered by the School of Sciences and Engineering.
3. A maximum of 12 transfer credit hours in the 300-400 level courses in programs offered by the School of Humanities and Social Sciences.

AUC students who joins a year abroad exchange program administered by the university are exempted from the residence requirement part of maximum transfer credits in 300-400 level courses towards concentration requirements.

Graduation

To be awarded the Bachelor of Arts degree, students must complete a minimum of 120 credit hours (126 in Business Administration) in courses in which the grades are "D" or better, and must earn a grade-point average of "C" or better, both overall and in the field of concentration. These requirements must be completed within seven years of the date of first registration as a freshman.

To be awarded the Bachelor of Science degree students must complete between 130 and 162 credit hours, depending on the major, in courses with grades of "D" or better and earn a grade-point average of "C" or better, both overall and in the field of concentration. These requirements must be completed within eight years of the date of first registration as a freshman.

Any period of withdrawal from the university is counted as part of the seven- or eight-year limit mentioned above.

Majors

The university offers courses of study leading to bachelor's degrees in various academic fields in the arts and sciences and in professional fields. Undergraduates must select a major and fulfill the requirements of the department offering the degree. The fields of major and the departmental requirements are described in the "Fields of Study" section. Academic regulations concerning the declaration of major and change of major are described in the "Academic Regulations" section.

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Double Majors

Students may earn two majors in related or unrelated fields and receive one bachelor's degree. The following rules apply:

Acceptance in a second major must occur before the last semester of the senior year. Acceptance into a second major will be on the same basis as if it were the first major.

Students must complete all the requirements for both majors. Only in cases where requirements in both majors designate the same specific course(s) can the same course(s) be counted for both majors.

Students must have a faculty adviser in each major. The advisers and student must meet together and plan the student's academic program. Both advisers must sign the student's registration forms.

One degree will be awarded upon successful completion of both majors. If one major qualifies for the bachelor of arts degree and the other for the bachelor of science degree, the student in consultation with his/her advisers will decide which degree to receive.

In considering whether to major in two subjects, students should be aware that it may take more than four years to complete all requirements, that scheduling of prerequisites and required courses in two majors may be difficult, and that some AUC departments, particularly those which limit enrollment, may not allow students to take a second major in their departments.

Minors

In addition to major subjects leading to a degree, students may select one or two minor fields of specialization. The minor program is available to students who would like to study a particular subject beyond the introductory courses but not to the level of expertise required for a major. An undergraduate minor introduces the student to the scope and methodology of the minor field and is often an important auxiliary to his/her major field. Students are encouraged to enter minors which will broaden their experience at AUC and enhance the interdisciplinary character of the undergraduate programs.

Minors may be within a given discipline, or interdisciplinary. Students wishing to minor in a given discipline may do so if they satisfy the requirements of the department or unit offering the minor, taking into consideration that in some cases the minimum credit hours required for graduation may have to be exceeded. At least 15 hours of courses as specified under each field are required for a minor. A course or courses specifically required in the major and the minor may count towards both the major and the minor. Course(s) which are not specifically required in the major and the minor, will not count towards both the major and the minor.

The requirements for individual minors appear under the relevant field of study.

Each interdisciplinary minor is administered by a steering committee which is itself interdisciplinary. Steering committee membership is open either to all teachers in the program or to representation from each department in the program in any given year.

Undergraduate Academic Regulations

Registration

Students must register during the official registration period at the times announced in the university calendar. They should plan their courses with their advisers prior to registration and follow the instructions contained in bulletins issued by the Office of the University Registrar or on the Registrar's Web site. Those seeking to enroll after the scheduled registration period cannot be guaranteed acceptance. If permitted to register they will be charged a late registration fee.

Change of Courses

With careful attention to the degree requirements and course offerings there should be minimal need for course changes after registration has been completed. Any student who desires a course change must follow the instructions contained in the bulletin issued by the Office of the University Registrar.

- Another course may not be substituted for a required course unless university action requires that the change be made.
- A course may not be added to the student's schedule after the registration deadline.
- Students may not drop 100-level Writing Program: Composition and Rhetoric courses without permission from the Writing Program administrators.
- Students may drop classes up to the end of the fourth week of classes in an academic semester or the summer session, with no grade record being maintained.
- Between the end of the fourth and the twelfth week of classes in an academic semester, students may drop courses. A grade of "WP" will be assigned to students whose performance is evaluated by the professor as "C" or above, or a grade of "WF" will be assigned to those whose performance is evaluated as less than "C".
- After the twelfth week in academic semesters and the fourth week in the summer session, students are not permitted to drop classes.
- Students will receive a grade of "F" if they stop attending classes without officially dropping the course.

Credit Hours

Coursework is counted in credit hours. In general, a credit hour represents a one-hour class period that requires at least two hours of individual study each week for one semester. Thus a course of three credit hours would meet for three hours a week and the student would be expected to study for six hours outside of class. Laboratory courses involve less outside work, so usually one hour of credit is granted for a three-hour session.

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Class Standing

Class standing is determined by the number of credit hours completed. Students become sophomores on completing 30 credit hours, juniors on completing 60 credit hours, and seniors on completing 90 credit hours.

Declaration of Major

Declaring intended Program during admission:

Students are required to indicate their preferred "Intended Program" during admission. Those who are not accepted to the program of their choice will be admitted as "Undeclared students".

Selection to degree program is based on:

- Secondary school performance (students who indicate their intended program during Admission).
- Academic requirements set by the department.
- Available places.

Declaring intended Program for "Undeclared" students at the end of their Freshman Year:

Students may choose to declare their major before the beginning of their third semester to have the opportunity to experience a variety of disciplines and courses, and be exposed to a wide range of academic choices.

Students follow the degree requirements stated in the catalog of the year in which they make their declaration. However, if a student withdraws from the university and is later readmitted s/he will be required to follow the catalog requirements of the year in which readmission occurs.

Change of Major

Students may change their field of study or be required to change it by university action at any time up to the end of their junior year. A change requires approval from the department of the new major. Students follow the degree requirements stated in the catalog of the year in which they make the change.

Students may not change their major after the start of their senior year, unless by university action.

Students who change their major anytime during their course of study until the beginning of their junior year are required to complete their degree work within the 18 credit hours over the normal major requirements.

Students who change their major at the end of their junior year or during their senior year by university action may be allowed to take courses beyond the normal maximum limits. Any adjustment in the limit will be based on the recommendation of the new major department to the appropriate school committee.

Academic Load

Full time undergraduate students normally take an academic load of twelve to sixteen hours, with the exception of science, engineering and computer science students who may take up to eighteen hours. In the summer session, students may take up to seven credit hours.

Permission to exceed the above maximums, up to twenty one credit hours in fall and spring semesters and nine credit hours in the summer, is based on the student's previous academic record in addition to the recommendation of the department chair and the University Registrar. Freshman students are not permitted to exceed the maximum load, and courses taken for no credit are included within that load.

Students taking less than twelve credit hours are part-time students unless they are seniors who need to complete their degree requirements, or are prevented from taking normal load as a result of university restrictions. Students may not change their status from full time to part time during the semester without the approval of the University Registrar.

The university encourages students to carry a full load and to devote all their effort to university work and activities to obtain full benefit from their undergraduate education. Those who cannot devote full time to their undergraduate program, whether because of needed employment or other obligations, may carry a lighter course load of six to nine hours. The university cannot reschedule classes because they conflict with outside obligations.

Full-time students are entitled to university certification concerning deferment from military service and are eligible for student aid and employment. Part-time students are not entitled to certification concerning military deferment and are not eligible for student aid or employment.

Foreign students carrying a full academic load are entitled to university certification for use in obtaining their student visa. In case of withdrawal, the university reports the Egyptian authorities to cancel the student residence visa that was received through the university. Part-time students are not entitled to university certification for obtaining a student visa.

Grades/Examinations

Student work in each course is evaluated throughout the semester. Examinations, quizzes, reports, discussions or other means of evaluation help students know how they stand in a course.

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Final examinations review the entire semester's work but are not heavily emphasized. Each examination lasts no longer than two hours and counts for no more than one-third of the final course grade. Except in 400-level courses and higher where extensive writing assignments and projects pertain, no other element in the final course grade will count for more than one-third. Final examinations are held during the official examination period, which is listed in the academic calendar of the university.

At the close of the semester students receive a final grade in each course. The grade is the professor's official estimate of the student's achievement as reflected in examinations, assignments, and class participation. The final grades are recorded on the student's permanent record at the Office of the University Registrar. The grade may not be changed on the student record.

The following grading system is used at the American University in Cairo:

Grade	Points	Description
A	4.0	Excellent
A-	3.7	
B+	3.3	Very good
B	3.0	
B-	2.7	Good
C+	2.3	
C	2.0	Passing
C-	1.7	
D+	1.3	Conditionally passing
D	1.0	
F	0.0	Failing

Grades not included in the Grade Point Average:

P	Pass*
F	Fail
I	Incomplete
S	Satisfactory
U	Unsatisfactory
W	Withdrew
WP	Withdrew-Passing
WF	Withdrew-Failing
AU	Audit
IP	In progress

*Pass indicates a quality of performance at the minimum level of " C." "Pass/Fail" grades are assigned only to certain courses as defined in their course description.

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The grade point average is calculated by multiplying the grade value by the number of credit hours the course represents; the result is the column listed as quality points. The total quality points is then divided by the total credit hours, excluding the credit hours for "P/F" courses, as illustrated below.

An example for calculating the grade point average:

Course ID	Grade	Credit Hrs.	Quality Points	
RHET 101	C	3	6	
CHEM 105	D	3	3	
CHEM 115L	C+	1	2.3	
MATH 131	F	3	0	
PHYS 111	A-	3	11.1	
PHYS 123L	B+	1	3.3	
Current AHRS	EHRS	QHRS	QPTS	GPA
14	11	14	25.7	1.83

AHRS: Attempted Hours are the credit hours that the student is registering for.

EHRS: Earned Hours are hours of courses in which the student achieved a passing grade, including courses with "pass/fail" grades. The earned hours (not attempted) are counted to determine the student's class and graduation.

QHRS: Quality Hours are hours of courses which are graded, excluding pass/fail or satisfactory/unsatisfactory courses.

QPTS: Quality Points are points allotted to each course, which are the result of multiplying the credit hours of the course by the points assigned to each grade mentioned above.

GPA: Grade Point Average is the quotient obtained by dividing the total quality points by the total quality hours i.e. $25.7/14 = 1.83$.

A "C" average (2.00) is required to graduate from the American University in Cairo. Likewise, a minimum grade point average of 2.00 is required in majors and minors.

Grades of "pass/fail", "S", "U", "I", and "W" are not assigned grade point values and are not used in the computation of the grade point average. Decimals beyond 2 places are truncated, not rounded up, in computing the grade point average.

Incomplete Work

In very rare cases, undergraduate students who are unable to complete a course may be permitted to continue work in that course beyond the examination period. Any

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professor submitting an incomplete grade must supplement this submission with a form to the Office of the University Registrar (copies to the instructor, and the student) giving the following information:

- a. Reason for the incomplete.
- b. The material which is lacking.
- c. Action necessary for removal of the incomplete.

In such a case, a grade of "I", for "incomplete," is assigned. The students must make arrangements with the professor to complete the course within one month after the beginning of the new academic session, whether they are in school or not. Failure to complete the course within one month after the beginning of the new academic session causes the grade in that course to be recorded as "F", signifying failure.

If students have one incomplete grade, their academic load limit the following semester will not be affected. If they have more than one incomplete grade, the credit hours of the incomplete will be included in their academic load for the following semester.

Students who receive an incomplete grade(s) while on warning due to a deficiency in their overall grade point average will not be allowed to register the following semester. If, however, they complete their incomplete work before the end of the late registration period, and are academically eligible, they will be allowed to proceed with registration.

Class Attendance

Attendance and participation in class and laboratory sessions are essential to the process of education at AUC. Students benefit from the lectures and discussions with their teachers and fellow students. If they fail to attend class, they fail to take advantage of an educational opportunity. For this reason students are expected to attend class regularly; there is no system of permitted absences. The instructor in each class determines the effect of absences on a student's grade in that class. General guidelines followed at AUC include:

- a. Any absence may affect the student's grade.
- b. Instructors need not give substitute assignments or examinations to students who miss class.
- c. In the event a student misses more than three weeks of classes during a semester for any reason, or the equivalent of three weeks in the summer session, an instructor may:
 - Give a grade of "F" for the course;
 - Ask the student to drop the course if the absences occur before the last date for dropping classes; and/or
 - If two of the three weeks of absences are caused by proven illness or other emergency, the student may be granted a grade of "I", for incomplete work, and allowed to finish the coursework by the end of the first month in the following semester.

A doctor's certification of a serious illness may be brought to the attention of the university physician, who will inform the Office of Student Affairs. The OSA staff will then contact the student's instructors to inform them of the expected length of class absence.

Repeating Courses Under the Course Repeat Policy

Effective fall 2002, all students pursuing an undergraduate degree may repeat a course one time for the purpose of improving a grade. This policy is limited to a maximum of twelve semester credits during the entire undergraduate career of a student, and to courses taken at AUC within the previous two years. All course repeats must be done at AUC. The course being retaken must be the same course first taken, unless that course is no longer offered at AUC, or during the two-year period. In such a case, only the department that offered the same course may substitute another course with approval of the major department.

A student cannot have the privilege of repeating a grade of "F" under this policy if the "F" is received for academic dishonesty.

If a student repeats a course, the credit from the first attempt will not be applied to meeting the AUC graduation requirements. No student will be permitted to repeat more than 12 credits under this policy.

Students are advised that repeating courses under this policy does not result in the removal of the original record or grade from their transcripts. The second grade is recorded and computed in the grade point average and the earlier grade is disregarded in calculation of the grade point average. The repeat course form is available in the Office of the University Registrar. The completed form must be submitted to the University Registrar's Office by maximum the twelfth week of the term in which the course is being repeated.

Students who have already repeated 12 units prior to Spring 1995 have used up their course repeat option. Their transcripts will not be altered retroactively.

Retaking Courses Outside of the Course Repeat Policy

A student who has exhausted the "Course Repeat Policy" privileges may still repeat a course in which "D+", "D" or "F" was earned. No additional course credit will be applied to meeting AUC graduation requirements, but both grades for that course will be calculated in the Grade Point Average.

Honors

The university awards honors to students who do superior work. Full-time students who earn a grade point average of 3.50 or above for the previous semester are placed on the dean's honor roll. This distinction is noted on the student's academic record.

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Graduation honors are awarded to students who have maintained a superior grade point average throughout their college careers:

- a. Students who enter the university as freshmen or sophomores earn honors (Cum Laude) if they graduate with a cumulative average of 3.4, high honors (Magna Cum Laude) with 3.6 and highest honors (Summa Cum Laude) with 3.8.
- b. Students who graduate from the university with transfer credits of 45 hours or more receive graduation honors if they earn a cumulative average of 3.5, high honors if they earn a grade point average of 3.7 and highest honors if they earn a grade point average of 3.9.

Probation/Warning

Students who fail to meet the academic standards established by the university will be placed on probation. The probation period provides the student with an opportunity to correct the deficiency, but that period may last for no more than two regular semesters. Failure to achieve the required standard by the end of the probation period disqualifies the student from further attendance at the university.

Students who fail to maintain a cumulative grade point average of 2.0 or better at the end of a semester will be placed on probation. Students who fail ENGL 100 will be placed on warning.

In the above cases, a letter is sent to the student, to his home address, which includes a statement of what is required to avoid dismissal from the university. To be allowed to continue on probation the following semester students in this category must show satisfactory improvement during the first semester of their probation period (i.e. achieve at least a 2.0 semester GPA).

Students placed on probation for a deficiency in their cumulative GPA must limit their academic load during their probation period to four courses with a maximum of 13 credit hours per semester. The permissible load for students taking ENGL 100 is a maximum of 7 credit hours per semester. It is the responsibility of the adviser to follow up on the student's performance and academic load.

Students who fail to maintain a grade point average of 2.0 in their major at the end of any semester following their declaration of major, will be placed on major probation. A letter is sent to the student, to his home address, with a copy to the department of major.

Students will have two semesters to clear the deficiency in their major. If by the end of the two semesters the deficiency is not corrected, they will be discontinued unless accepted in another major.

Students on probation/warning for any of the above deficiencies are not allowed to participate actively, or represent the university, in co-curricular activities, such as teams, clubs, plays, and university competitions. They may not be nominated for the Student Union.

Dismissal

To avoid dismissal, students on overall probation must achieve a semester grade point average of 2.0 following the first semester of their probation period, and a cumulative grade point average of 2.0 at the end of the second semester of their probation period.

A student who fails ENGL 100 twice in two regular semesters and a third time in a Summer session will be dismissed from the University and must wait one full semester before applying for readmission. The student must score high enough on the AUCELPET for direct admission to the Writing Program: Composition and Rhetoric since s/he will not be allowed to take ENGL 100 for a third time during a regular semester.

Planned Educational Leave of Absence

Students at The American University in Cairo may apply for a Planned Educational Leave of Absence. A Planned Educational Leave of Absence is defined as a planned interruption or pause in a student's regular education during which the student temporarily ceases his or her formal studies at AUC while pursuing other activities that may assist in clarifying the student's educational goals. The intent of the policy is to make it possible for a student to suspend his or her academic work, leave the campus without jeopardizing his or her rights and privileges, and later resume his or her studies with a minimum of procedural difficulty. A student who is approved for a planned leave will be considered as maintaining his or her status as a continuing student.

Planned educational leaves may be granted for a variety of reasons or projects, but certain characteristics must be contained in any request for a leave:

- The leave must have a definite purpose relevant to the student's overall educational objectives and goals.
- The request must be for a specific period of time which should not exceed 3 regular semesters for students pursuing an undergraduate program.
- The student must plan to return to AUC at the conclusion of his or her leave.

The following regulations apply to the planned educational leave:

1. An application for a Planned Educational Leave of Absence and additional information can be obtained from the Office of the University Registrar.
2. The student must obtain the approval of his or her faculty advisor, the department chair of his or her major (or, in the case of an undeclared student, the Freshman Advisor) and the University Registrar.
3. The student should be in academic good standing at the time of the leave request. The leave application must be submitted to the Office of the University Registrar by the start of the final examination period of the semester immediately preceding the requested leave. The Office of the University Registrar will notify the leave applicant of the status of the request after all of his or her final grades have been submitted.
4. The student may cancel a leave of absence as late as the first day of classes of the

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- term for which the leave has been requested. However, the deadlines for payment of the term bill and the penalties for late payment apply in such cases.
5. A degree student who discontinues active enrollment in degree studies without being granted a leave of absence, or a student granted a leave who does not return to active study at the close of the period of approved absence, will be considered to have withdrawn from the University and must apply for readmission and be subject to the regulations and requirements then in force.
 6. The right to use university facilities is suspended while the leave is in effect, with the exception of library privileges subject of the approval of the department of major.
 7. A Planned Educational Leave of Absence is counted as part of the time limitations specified under the heading "Graduation" in this section. A student returning from an approved leave remains under the requirements of the catalog that s/he was following upon the declaration of major.
 8. Any academic credit during a Planned Educational Leave of Absence is accredited by AUC only if permission is granted in advance by the University Registrar.

Withdrawal from the University

Students who are unable to complete a semester because of illness or other emergency may be given permission to withdraw. They must acquire a withdrawal form from the Office of the University Registrar, obtain signatures as indicated on the form, and return the completed form to the Office of the University Registrar. Deadline for withdrawal from the university is one month before the last day of classes.

Withdrawal grades will be recorded for each course when the student receives permission to withdraw. The grades are either WP, meaning that the student was doing satisfactory work at the time of withdrawal, or WF, meaning that the student was not doing satisfactory work at the time of withdrawal. No academic credit is given for courses from which students withdraw.

Students who withdraw from the university and later wish to return must apply for readmission. Readmission is not granted automatically. (See the "Admissions" section of the catalog.)

Transcripts

Students who have graduated or who withdraw from the university in good standing are entitled to one free student transcript of their academic record. No transcript of academic record will be issued during the examination, registration, or graduation periods. Academic transcripts will not be issued when unsatisfied financial obligations to the university exist.

Non-degree Academic Regulations

Since non-degree students are usually seeking credit for transfer to other institutions,

not all of the academic regulations in the previous section are applicable to them. They will be primarily concerned about the academic regulations of their home institutions to ensure that they receive maximum possible credit for their AUC work.

Non-degree students should note the sections pertaining to registration, change of courses, academic load, grades, probation, incomplete work, class attendance, and transcripts in the undergraduate section as appropriate.

Non-degree students who wish to transfer their ALU (Arabic Language Unit) special program credits towards a degree in a regular AUC program should get the approval of their department of major. However, those wishing to transfer credits to their home universities should check these universities' policies before coming to Cairo.

Academic Integrity Policy

Preamble: Valuing the concepts of academic integrity and independent effort, the American University in Cairo expects from its students the highest standards of scholarly conduct. The University community asserts that the reputation of the institution depends on the integrity of both faculty and students in their academic pursuits and that it is their joint responsibility to promote an atmosphere conducive to such standards.

- I. Academic dishonesty is not acceptable in an institution dedicated to learning or in any society. Academic dishonesty includes, but is not limited to:
 1. Cheating: using unauthorized notes, aids, or information on an examination; altering a graded work prior to its return to a faculty member; allowing another person to do one's own work and submitting it for grading.
 2. Plagiarism: submitting material that in part or whole is not one's own work; submitting one's own work without properly attributing the correct sources of its content.
 3. Fabrication: inventing or falsifying information, data, or citation; presenting data gathered outside of acceptable professorial guidelines; failing to provide an accurate account of how information, data or citations were gathered; altering documents affecting academic records; forging signatures or authorizing false information on an official academic document, grade, letter, form, ID card, or any other university document; submitting false excuses for absence, delay or illness.
 4. Multiple Submissions: submitting identical papers or course work for credit in more than one course without prior permission of the instructor.
 5. Obtaining or Attempting to Obtain Unfair Advantage:
 - a) gaining or providing access to examination materials prior to the time authorized by an instructor;
 - b) stealing, defacing, or destroying library or research materials which can deprive others of their use;
 - c) unauthorized collaboration on an academic assignment;
 - d) retaining, possessing, or circulating previously used examination materials without the instructor's permission;
 - e) obstructing or interfering with another student's academic work;

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- f) engaging in any activity designed to obtain an unfair advantage over another student in the same course;
 - g) offering bribes to staff or any university employee to effect a grade change, or gain unfair advantage over other students.
- 6. Unauthorized Access: viewing or altering in any way computer records, modifying computer programs or systems, releasing or distributing information gathered via unauthorized access, or in any way interfering with the use or availability of computer systems/information.
- 7. Aiding and Abetting: providing material, information, or other assistance which violates the above Standards for Academic Integrity; providing false information in connection with any inquiry regarding academic integrity.
- 8. Impersonation: impersonating or allowing to be impersonated by another individual during classes, examination or other university activities.
- 9. Threatening harm: threatening, effecting, or encouraging bodily, professional or financial harm to any faculty, staff, administrator or student who has witnessed or reported a violation of the Code of Ethics.

The University reserves the right to take disciplinary action as severe as dismissal according to procedures delineated in section II.

II. An instructor has full authority to deal with an academic dishonesty incident within the context of his/her course. Disciplinary action may cover the range from reprimand to "F" for the course grade. The instructor may also recommend suspension or dismissal from the University.

The instructor's action on incidents of academic dishonesty must be communicated to the student(s) involved as well as to the Student Affairs Office and the office responsible for monitoring academic integrity by her/him within two weeks of the time the instructor became aware of the incident.

All cases of academic dishonesty are to be immediately reported to the chair of the Academic Integrity Committee and to the Chair of the instructor's department. In the case of a recommendation for suspension or dismissal, the Academic Integrity Committee will meet promptly to investigate and submit a recommendation to the Provost, who is the final authority.

All students involved in academic dishonesty will receive an official letter of warning from the University administration, a copy of which will remain in the students' file in the department as well as in the Student Affairs Office and the office responsible for monitoring academic integrity.

III. Once the Academic Integrity Committee has given a hearing to the student and submitted its recommendation to the Provost, no further appeal may be made unless substantial new evidence is presented to the Chair of the Academic Integrity Committee, who will evaluate the evidence and reopen the case if deemed necessary.

STUDENT FINANCES

Tuition and Fees

Starting the academic year 2003/2004, there has been two tuition rates: one for Egyptian students and non-Egyptian students who are permanently resident in Egypt (category A) and the other for non-Egyptian, non resident students (category B).

Category A students will pay the tuition fee in Egyptian pounds according to the tuition rates stated in the bulletin issued by the Office of Student Financial Affairs each academic year. Category B students will pay the tuition fee in US dollars according to the tuition rates stated in the same bulletin. For the year 2005/2006, the full tuition fees per semester is set at L.E. 34000 for category A students and \$ 6750 per semester for category B students. In recent years, tuition has risen from five to ten percent annually. Such increases are likely to continue in future.

The highest-ranking undergraduate students are given tuition scholarships based on academic achievement providing them with reduced actual rates. Students may retain their achievement scholarship at the same level as long as they maintain their performance level. (Refer to achievement scholarship policy under "Undergraduate Scholarships" in this section of the catalog). Students beyond their freshman year have to maintain a full time status during the year in order to be eligible for continuing scholarship awards.

A few students may also be admitted with sports or cultural scholarship. Sports and cultural scholarships awarded at the time of admission are one-year scholarships. They may be renewed for subsequent years if the student represents the university in the official championships or contests organized by national government bodies.

Tuition charges cover 12-15 undergraduate credit hours per semester. Additional charges will be made for additional credits. No student with bills outstanding, including charges for breakage or library fines, will be admitted to any examination, given any certificate or report of academic standing, or be permitted to register for a subsequent semester.

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Deferred Payment

When a student is unable to pay the entire amount due at the time of registration, the Director of Student Financial Affairs may approve payment in two installments as follows:

- a. 50% to be paid at the time of registration.
- b. The balance must be paid by November 25th for deferment of fees granted for the fall semester and April 5th for deferment of fees granted for the spring semester.
- c. The student will pay an administrative fee that will be set each year.

The deferred payment policy applies to continuing students only, and -normally- no deferred payments are made for the first semester of registrations. However, under certain conditions, the deferred payment may be approved on a case-by-case basis for new students provided that the student pays -at least- 70% of the tuition at time of registration and pays the other 30% within three months from the date of paying the first installment.

Tuition Fee for Readmission

1. Disqualified cases:
students who were disqualified and readmitted will be required to pay the full tuition fee prevailing at the time of readmission.
2. Readmission after one semester of withdrawal:
no change in tuition level, same as prior to withdrawal.
3. Readmission cases for students who withdrew for more than one semester:
students will pay according to the tuition level of their cumulative GPA at the time of readmission.

Refund Policy

Given the need to know which new undergraduate students will attend AUC in order to admit alternate candidates by the beginning of classes, new undergraduate students are not entitled to refunds.

A full refund for continuing students is made only for courses dropped before the end of the late registration period. Students who drop a course after the deadline for late registration are not entitled to any refund for the course(s) dropped. However, students who withdraw from the university after the deadline will receive a partial refund, the amount depending on the number of weeks which have elapsed since the beginning of classes. Refunds are made according to the following schedule:

- First week of classes: full tuition refund
- Second week: eighty percent tuition refund
- Third week: sixty percent tuition refund
- Fourth week: forty percent tuition refund
- Fifth week: twenty percent tuition refund
- After the end of the fifth week no refunds will be made.

Summer-session students who withdraw one day after registration can be refunded the amount paid. Summer session students who withdraw more than one day after registration will receive a partial refund according to the following schedule:

- By the end of the first week: seventy five percent of tuition and fees.
- By the end of the second week: fifty percent of tuition and fees.
- After the end of the second week no refunds will be made.

The refund schedule refers to tuition for credit courses, audited courses, and instruction in the ALI and English Language Institute. The student services and activities fee, the application fee, laboratory and studio course fees, and special charges are not refundable.

Center for Adult & Continuing Education & Training Programs

For regular courses offered by the Center for Adult and Continuing Education, the Institute of Management Development, and Engineering Services, schedules of fees are included in separate announcements. Fees for other educational and training programs are based on separate contractual arrangements. Most programs have differential fees for Egyptian and non-Egyptian participants.

Scholarships and Financial Aid

Although the American University in Cairo is a private university that depends upon tuition and contributions for its operation, it attempts to provide financial assistance to any student with a GPA of not less than 2.00 who demonstrates financial need. AUC offers, in addition to its high tuition scholarships for most students, a range of merit scholarships, financial aid, and student work programs to assist students in meeting the expenses of their education. For a listing of the available scholarships offered by outside organizations, please see the section on scholarships in the chapter entitled "The University". Scholarships and financial aid are not available for the summer or winter sessions.

Undergraduate Scholarships

1. Achievement Scholarships :

For the year 2005/2006, the achievement scholarship will be given to the top 25% of new Egyptian and non-Egyptian students for a one year period. The achievement scholarship award is L.E. 10700 per semester (or L.E. 21400 per year) for category A students and \$ 2080 per semester (or \$ 4160 per year) for category B students. The achievement scholarship is also applied for summer course; it will be calculated proportionally according to the number of credit hours taken during summer session.

The achievement scholarship is a one-year award that is re-evaluated annually each June, after the spring semester's exam results. Students will retain their achievement

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scholarship as long as they maintain a cumulative GPA of not less than 3.0 and a full-time status (i.e. they should have completed 24 credit hours during the fall and spring semesters of the previous academic year). Students who take remedial English courses (i.e. ELI and/or English 100) during the fall and/or spring semesters of the previous academic year will retain their achievement scholarship at the same level. Transfer credits are not counted in the 24 credit hours.

If a student's cumulative GPA falls below 3.0 or s/he does not maintain a full-time status, s/he will lose the scholarship. Students who have lost their scholarship, but achieved a GPA of 3.75 or above in subsequent year(s) or students who joined the university with no achievement scholarship but subsequently achieved a cumulative GPA of 3.75 or above for a minimum of 30 credits hours of work at AUC, may be granted the achievement scholarship. In both cases, the student must maintain a full-time status during their course of study at AUC.

The above arrangements are applied to students admitted in or after the academic year 2003/2004. For those admitted in the academic years 2001/2002 and 2002/2003, they will continue on the previous achievement scholarship policy, but the privilege of upgrading the students on the second and the third levels to the first level if they achieved a GPA of 3.75 or more for a minimum of 30 credit hours of work at AUC and maintained a full-time status will be extended. Students admitted before the academic year 2001/2002 will continue to be treated according to the achievement scholarship policy prevailing at their year of admission.

2. Scholarships for Students from Government Secondary Schools:

AUC offers fifteen full-tuition scholarships per year to students from free government schools with good academic qualifications demonstrating serious financial need. Selected students will maintain their scholarship until graduation as long as they are making satisfactory progress towards their degrees. Nomination of students is made by the Ministry of Education and final selection is made by the university from among those who meet the admissions requirements.

3. Sports Achievement Scholarship:

Sports achievement scholarship is awarded each year to a limited number of new students who participated in sports that are listed in the Egyptian Championship Tournament or by the Olympic committee, and achieved a high level of distinction in these sports.

The sports achievement scholarship gives the student a tuition reduction equal to 15% of the full tuition fee. (For more details please refer to the following website: <http://aucadmin.aucegypt.edu/stufinance>).

4. Sports Merit Awards:

Students participate in the National Universities Championship may be granted a cash award according to the criteria which will be determined every year by the

University according to the allocated funds and number of winners of gold, silver and bronze medals. Selected students must have a Grade Point Average of not less than 2.5 in the year of which the award is granted.

5. Cultural Achievement Scholarship:

Cultural achievement scholarship is awarded each year to a limited number of new students who participated in cultural activities organized by local official government bodies, and achieved a high level of distinction in these activities.

The cultural achievement scholarship gives the student a tuition reduction equal to 15% of full tuition fee (For more details, please refer to the following website: <http://aucadmin.aucegypt.edu/stufinance>).

6. Cultural merit Awards:

The university annually provides a number of cultural achievement awards to students who have been enrolled for at least one academic year. The criteria and size of cultural achievement awards are determined every year by the University according to the allocated funds and the number of winners of first place in one of the national cultural contests organized by an official government recognized body, or students recommended by the trainers. Selected students must have a grade point average of not less than 2.5 in the year for which the award is granted.

Financial Aid and Work Study for Students

The financial aid and student work program at the American University in Cairo is designed to provide financial assistance in the form of a grant or student work to Egyptian undergraduate students who need it to attend AUC. This financial aid or work covers only partial tuition at the university.

In addition to the achievement scholarships that most students receive, approximately fifty-five percent of Egyptian undergraduate students have received additional financial assistance in recent years.

Eligibility

In order to be eligible for financial aid or student work, students must meet all of the following criteria:

- a. Financial need established through the financial aid form.
- b. Full-time undergraduate degree status.
- c. Accumulated grade-point average of not less than 2.0.

Selection

The University Financial Aid Committee will make awards and establish student assignments for the fall and spring semesters. A student applying at the beginning of the academic

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year may receive financial or work assistance for the full academic year. A student applying in the spring semester may receive financial or work assistance for one semester only.

Awards and Renewal

Financial aid grants or work assistance will be determined according to student or family financial resources, as appropriate, within university budget limitations. Financial need is defined as the difference between the costs of attending the American University in Cairo and the amount a student or family can contribute toward those costs. Aid may include both grants and part-time student work.

AUC will provide financial or work aid to continuing recipients who remain eligible and continue to demonstrate financial need. The amount and kind of aid a student receives will be reviewed each year so that any changes in fees and in family resources can be taken into account. Students are normally responsible for reporting changes in their family's financial resources. A student's award may increase, decrease, or remain the same from year to year, depending upon university costs, the family's current financial ability, and university budget. Normally, students on probation are not eligible.

Students who wish to apply for financial or work aid must submit the university's financial aid form with required supporting documents to the Office of Student Financial Affairs by the deadlines shown below:

Category	Period of Support	Deadline
New Students	Academic Year	Sept. 15
Returning Students	Academic Year	May 15
New Students	Second Semester	Dec. 31
Returning Students	Second Semester	Dec. 15

Student Work Program

Part of the financial aid program is made available through work assignments for students on campus which assist them financially, provide them with educational experience, and help develop their skills. Details on the student work program including areas of work, compensation and application are announced through a separate bulletin published by the Office of Student Financial Affairs; assignments are also made and supervision exercised by that office.

Other Financial Assistance and Awards for Non-Egyptian Students

Study Abroad Students from U.S. State Universities

A partial tuition waiver is available to students currently enrolled full-time in their first undergraduate degree program at a U.S. four-year state university. The waiver assumes that the out-of-state (non-resident) tuition rate is lower than AUC's tuition. The waiver equals the difference between the two tuition rates. AUC must receive an official letter from the state university bursar or other responsible officer confirming that college's out-of-state tuition rate for the same period the student will be attending AUC.

The waiver of the tuition difference is applicable only to undergraduate study abroad for a maximum of two semesters. It does not apply to the summer session; to study in the Arabic Language Institute's intensive Arabic program; to part-time study; or to study towards an AUC degree. Students should contact AUC's New York Office for details (e-mail: aucegypt@aucnyo.edu).

AFS, EIL, and YFU Scholarships

The American University in Cairo offers two scholarships annually to alumni of each of the following programs: American Field Service; Experiment in International Living; and Youth for Understanding. Alumni of these programs must be non-Egyptian and seek their undergraduate degree from AUC. The award is a tuition credit equivalent to \$1,000 per year and will be awarded based on the individual's academic merit and financial need. Students must file the Financial Aid Profile of the College Scholarship Service (Box 6376, Princeton, New Jersey 08541, U.S.A.) and AUC's financial aid form immediately after admission. The scholarship is renewable based on academic performance and financial need.

Gilman Scholarships

U.S. undergraduates can receive financial support for study abroad programs worldwide through the new Benjamin A. Gilman International Scholarship Program of the State Department's Bureau of Educational and Cultural Affairs. The program is named after Congressman Ben Gilman (R-NY), the sponsor of legislation that sets aside \$ 1.5 million to broaden and increase opportunities for study abroad by undergraduate students who face financial constraints. The Institute of International Education (IIE), a New York-based non-profit organization, will administer the program through its Southern Regional Office in Houston, Texas under a grant from the Bureau.

Established under the International Academic Opportunity Act of 2002, Gilman International Scholarships will provide up to \$5,000 for American students to pursue overseas study for college credit.

Application forms are available at the Gilman International Scholarship website, www.iie.org/gilman. Additional information is available through IIE's Southern Regional Office by e-mail, at gilman@iie.org, or by calling (713) 621-6300 ext. 25.

Outside Assistance for American Students

Other than the opportunities described above, American students may be able to obtain outside support for work at AUC from the following sources:

1. Rotary Foundation International Scholarships for one year of undergraduate, or language study. Contact: student's local Rotary Club or Rotary Foundation of Rotary International, 1 Rotary Center, 1560 Sherman Avenue, Evanston, Illinois 60201. www.rotary.org
2. Veterans Administration educational benefits are applicable to undergraduate degree study at AUC. U.S. veterans should contact their regional office of the Veterans Administration. Written approval of benefits from the Veterans Administration should be obtained prior to coming to Cairo. <www.va.gov>

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3. Federal Stafford Loans can be used by U.S. citizens or permanent residents for undergraduate degree study or to earn a certificate in Arabic language (at least one year of intensive study). Pell Grants are not applicable. Degree and certificate students must obtain instructions from the AUC New York Office (e-mail: aucgypt@aucnyo.edu). Study abroad students may apply to their home university's financial aid office for campus-based aid and/or student loans to be used while they are enrolled at AUC.



STUDENT LIFE

The American University in Cairo occupies an urban campus. Most students live at home with their families, although most foreign students (over 14 percent of the student body) live in university housing or share furnished apartments.

Student activities are promoted and supervised by the Office of Student Development (OSD) under the Vice President of Student Affairs within the context of university policy and the Student Union (SU) constitution. The Office of Student Development includes three units: Student Organizations, Community Service, and Cultural Programs. The administration reserves the right of veto in matters of student activities including those mentioned in the constitution.

Activities

The many extracurricular activities available at AUC reflect the diverse backgrounds and interests of its students. While some events are sponsored and organized by the departments and units, most are initiated and carried out by student groups.

Student Associations and Clubs

The Student Union is composed of elected representatives from each and constituency undergraduate major. It provides student representation on university academic and other committees, organizes events and services, and coordinates the activities of student clubs and associations. Student associations and clubs provide a variety of ways for students to share similar interests. Some groups are formed by students with an interest in geographic areas, like Al Quds Club. Others provide services to the Egyptian community, such as Volunteers in Action. Still others are formed around specific interests or majors, like the Political Science Association and Computer Club. Student organizations sponsor lectures, films, shows, and exhibitions as well as trips to places of historic, scientific, or other interest in Egypt. Each student organization has a faculty advisor with experience and expertise in the club's area of activity. Membership in all clubs is open to any interested student. The Office of Student Organizations is responsible for guiding and supporting the Student Union, academic clubs, and the student conferences. A new student organization may be formed with recognition from the Student Union and approval by the Office of Student Development. All organizations must renew their recognition and approval each year.

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Student Organized Conferences

Student organized conferences, such as Model United Nations and Model Arab League (under the auspices of the Political Science Department, and Office of Student Development for non-conference activities) as well as others, including the Student Leadership Conference, International Conference on Information Technology and Global Economy Conference, afford the opportunity for students to learn special skills such as negotiation, public speaking, expand their knowledge of the world, and participate in a major organizational challenge. Conferences are valued by the University and its students, involve hundreds of students from AUC and other Universities, both in Egypt and abroad and contribute significantly to student life on campus.

The Community Service Program

Anti Cancer team, Anti Drug team, Hand in Hand, Volunteers in Action, Help Club, Friends in Need, Rotaract etc. are all community service clubs that work with the spirit of serving the Egyptian Community. The Office of the Community Service Program supervises all community service activities, and focuses on raising students' awareness regarding the social challenges facing their community, and gives them the opportunity to take initiative in dealing with such problems. This way the students benefit by enhancing their social commitment. They also learn positive values such as leadership and citizenship and how to become engaged in a positive social action. Currently there are more than ten community service volunteer clubs operating with different groups of unprivileged people including the poor, the blind, orphans, cancer patients, the elderly and children with special needs etc.

Cultural Activities

The Office of Cultural Programs is responsible for cultural clubs and groups. The Choral Group, Music Group, Egyptian Folk Dance Troupe, Marionette Group and Art Group, along with several other cultural activities groups, are trained by competent professionals on an extracurricular basis throughout the academic year. They represent AUC every spring with students of Egypt's other universities in the National University Cultural Activities Competition. Trips to represent Egypt and The American University in Cairo at festivals abroad are planned periodically for the choral and folk dance ensembles.

Lectures and Concerts

Lectures held at AUC cover a wide variety of topics and feature scholars, diplomats, political figures, businessmen, and others from the university itself, and from Cairo and abroad. The University's Distinguished Visiting Professor program enables individual departments to host speakers throughout the year. In addition, student organizations invite guest speakers whose lectures are open to the university community.

Musical performances by visiting artists and AUCians are given throughout the year. Concerts feature a wide variety of music including classical and contemporary Arabic music, jazz, and western classical music performed by local groups like the Cairo Symphony, by international ensembles on tour and by talented students.

Theatre and Film

The AUC Theatre Company, comprised of theatre majors as well as students from

other departments, is one of the most active student enterprises on campus. Under the guidance of the Theatre faculty, students from all nationalities act and occasionally design and direct several productions a year ranging from classics to modern experimental theatre. Students also play a major role in constructing sets, costumes, lighting, sound, and make up. Recent plays include Shakespeare's *Macbeth*, Feydeau's *A Silly Goose*, Pirandello's *Six Characters in Search of an Author*, Farag's Sulayman El Halabi, Dorfman's *Reader*, Congdon's *Tales of the Lost Formicans*, Sophocles' *Antigone* and Ibsen's *Ghosts*. Productions in English and Arabic. Plays take place in two new state-of-the art theatres in the Falaki Academic Center.

Films are a favorite form of recreation at AUC and several university units organize regular showings.

Student Publications

Caravan, the student newspaper, is published weekly, in English and in Arabic, and distributed on campus without charge. It is both a learning laboratory for students majoring in Journalism and mass communication who receive some academic credit for participation, and a co-curricular activity open to participation by reporters, photographers, and students with writing skills or artistic talent from the student body at large. Over the years many Caravan alumni have become professional journalists in Egypt, elsewhere in the Middle East, and in the West. All student publications activities are guided by faculty advisors.

Sports

The university has limited but intensively used athletic facilities on campus, accommodating basketball, boxing, fencing, mini soccer, table tennis, tae kwondo, tennis, volleyball, wrestling, etc. There are provisions for AUC students to participate in additional sports at clubs in the area, including gymnastics, football (soccer), handball, horseback riding, jogging, rowing, squash, swimming and diving, track and field and water polo.

Participation is open to men and women. Talented students participate in national competitions and matches with other universities. Beginners' classes in a number of sports are periodically organized, and exercise facilities are open to all students. The Zamalek Student Residence also has an exercise gymnasium to serve residents.

Parents Association

The Parents Association (PA) was established in 1985 with the objective of creating a partnership between parents and the University to enhance the learning opportunities for AUC students. All parents of undergraduate students are members of the PA. Within the PA, a board is elected that works entirely on a voluntary basis to further the aim of the Association through bylaws regulating all PA activities and initiatives. Each year, the Parents Association offers the PA Scholarship to assist a student who faces sudden financial difficulty during his or her term of study. During the spring commencement, the PA also bestows upon an exceptionally gifted and outgoing faculty member the PA Excellence in Undergraduate Teaching Award. Furthermore, during the fall and spring commencement ceremonies, the Association awards the PA Cup to an exceptional student who successfully maintains a high grade point average in addition to taking part in student-run initiatives.

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and organizations. The PA Cup has become one of the most distinguishing features of every AUC commencement ceremony.

Cafeterias and Services

Cafeterias

The university has cafeterias on the Main Campus on the Greek Campus. Each serves snacks, sandwiches, drinks and hot lunches at midday.

Student Center

The university's student center is located in the Wallace Building and includes a lounge, the Student Union office and the Office of Student Organization Activities.

Fountain Shop

The Fountain Shop, located in the main campus cafeteria, offers souvenir items, tapes, magazines, film-developing service and other items and services of interest to the AUC community.

Duplicating Services

Duplicating centers which serve the students and the AUC community are located in the cafeteria on the Main Campus and just inside the library gate on the Greek Campus.

Bookstores

Textbooks and a broad assortment of general books may be purchased in the Hill House Bookstore on the Main Campus. A smaller general bookstore, open to the public, is located in the Zamalek Student Residence.

Housing

The Zamalek Student Residence provides accommodation for 300 students with separate sections for men and women. Egyptian students from other cities or whose parents live abroad, as well as many international students from Arab countries and around the world, choose to live in the Zamalek Student Residence.

The building is entirely air-conditioned, with many facilities including an exercise gymnasium, computer lab, cafeteria, study room, common TV with satellite and VCR, housekeeping, rooms with T1 high speed Internet connections, phones for making local phone calls or receiving international calls. Room cleaning and laundry of bed linens are provided. There is 24-hour security, a part-time clinic staffed by a physician, and a small stationary/bookstore. Shuttle transportation to and from AUC runs continuously.

Orientation, Counseling and Health Services

An orientation program for new students covers the academic and extra/co-curricular activities at the university. Additional orientation for non-Egyptian students focuses on cultural opportunities, adjustment to Cairo, special procedures, etc.

The university employs qualified counselors at the Student Counseling Center to assist students with personal difficulties and growth issues. The Director of International Student Services is available for ongoing orientation and counseling of international students. The university physician and counselors refer students to professional help outside the university when necessary.

The university clinic, with the university physician and trained doctors and nurses in attendance, is open every day, except for Fridays and Saturdays, to provide medical services. The clinic is open from 8:00 a.m. till 5:00 p.m. A qualified nurse is available after 3:30 p.m. and till 5:00 p.m. The university provides limited accident insurance for all students while they are on the campus or engaged in certain university activities. Medical costs beyond the provisions of this insurance must be paid by the student. International students are required to have health-insurance coverage.

Student Conduct

The American University in Cairo is a guest in Egypt with a purely educational mission. It encourages open study and examination of all intellectual subjects in its academic work. Both its curriculum and extracurricular activities are dedicated to helping produce informed and independently-minded human beings. But as a matter of basic policy AUC carefully refrains from involving itself in political or religious issues, and it does not permit its campus or facilities to be used by outsiders, by AUC personnel, or students for such involvement. The AUC Board of Trustees does not take positions on political or religious matters, nor are any AUC bodies or entities permitted to do so. The university approves humanitarian assemblies, provided authorized procedures are followed.

Students who attend the university are expected to show concern for each other, for their teachers, and for the university itself. Student behavior is expected to be appropriate to life at an academic institution and to take into account Egyptian society and traditions. Rules of student conduct, intended to perpetuate and reinforce these policies, are explained more fully in the Student Handbook and other student information materials.

Because of the importance of maintaining the complete integrity of its academic work and of ensuring that AUC remains a purely academic apolitical institution, respected in the community at large and maintaining its liberal education atmosphere, the university views the following violations of AUC policy with special seriousness:

- I. Cheating (see Academic Integrity Policy under Academic Regulations section).
- II. Involvement in political or religious issues or activities on the campus or in the dormitory or the instigation of or participation in such unauthorized activities.
- III. Behavior that disturbs university functions and activities.
- IV. Participation in any illegal activity, on or off campus.
- V. Face veiling "niqab" in any form on university premises or at any university events.

Students violating standards of conduct, particularly those mentioned above, may be subject to disciplinary action, including dismissal.

THE CORE CURRICULUM

Goals and Objectives

The Core Curriculum is a body of courses designed to provide a broad liberal arts base to students' education at AUC. It aims to develop basic academic and intellectual traits, familiarize them with certain bodies of knowledge and intellectual traditions, and to show how this diversity can be integrated. It covers a wide spectrum of human experience and knowledge, with special emphasis on the Arab World. It assists students in understanding their place in the world — socially, culturally, intellectually and historically. Whatever students' majors are, they need to understand science, social science, and the humanities in order to be thoughtful human beings and citizens. The Core also aims to enhance students' writing skills (and thereby their ability to reason and construct an argument) in both English and Arabic. Instruction ranges from small seminars to regular classes to large lectures. All courses other than the Information Literacy Clinic are given a letter grade and receive academic credit.

The specific objectives of AUC's Core Curriculum may be outlined as follows. The Core is designed to ensure that all students

1. Acquire basic language and literacy skills, such that they read, write and speak the English language fluently; possess a basic competence in the Arabic language; and are familiar with the basic skills of library and information technology usage.
2. Encounter both the patterns of rational thought and argumentation that underpin the world's great intellectual traditions, and the ways in which science addresses and seeks to comprehend the natural world.
3. Acquire familiarity with the modern Arab world and its historical and literary heritage.
4. Experience the ways in which the Liberal Arts enrich their ability to understand and appreciate the world.

During the academic years 2002-2004, the Core Curriculum underwent substantial revision. The process of revision is on-going and is expected to continue for a number of years to come.

- Students who started the Core Curriculum before the 2003-04 academic year will satisfy the Core Curriculum requirements as described in earlier Catalogs, or by taking elective courses listed below in place of those listed in earlier catalogs.
- Students who started the Core Curriculum in 2003-04 will satisfy their Core Curriculum requirements as described below. Insofar as the description below includes adjustments to the structure of the Core Curriculum operative during the 2003-2004 school-year, any questions or conflicts that may arise will be resolved by decision of the Director of the Core Curriculum.
- Students starting the Core Curriculum in 2004-05 will satisfy their Core Curriculum requirements by taking such courses as are listed below.

General Description

The Core Curriculum is divided into four components, which reflect the four objectives described above. All students must complete between 30 and 46 credit hours in the Core Curriculum. Students who demonstrate the appropriate competence may be exempted from up to 6 credit hours of Arabic language and/or up to 6 credit hours of Writing Program: Composition and Rhetoric courses. Students majoring in the fields of science and engineering are exempted from the General Science elective requirement (4 cr. hrs.).

The basic structure of the Core Curriculum and its four components is summarized below. Details concerning the courses that students either must take or may choose to take in order to complete their Core obligations follow on in the section labelled "Detailed Structure".

1. **The Writing Program: Composition and Rhetoric, Arabic Language, and Information Literacy Requirement (3-15 credit hours)**
The following courses are required of all students, subject to certain exemptions explained below:
 - A. The Writing Program: Composition and Rhetoric (3-9 credit hours)
 - B. Arabic language (0-6 credit hours)
 - C. Information literacy (non credit)
2. **Fundamental Intellectual Skills Requirement (6 credit hours)**
The following courses are also required of all students, with no exceptions.
 - A. Scientific Thinking (SCI 120, 3 credit hours)

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- B. Critical Thinking (PHIL 220, 3 credit hours)
3. **Arab World Studies Requirement (9 credit hours)**
All students are required to fulfill all three of the following requirements, with no exceptions.
- A. One Arab history course selected from a list of alternative courses (3 credit hours)
 - B. One Arabic literature course selected from a list of alternative courses (3 credit hours)
 - C. Arab Society (ANTH/SOC 210, 3 credit hours)
4. **Liberal Arts Requirement (12-16 credit hours)**
Most students are required to fulfill all the following five requirements (totaling 16 credit hours). Students majoring in any of the fields of the School of Sciences and Engineering are exempted from the General Science requirement; they must therefore choose *four* courses (totaling 12 credit hours), one from each of the fields B, C, D and E below.
- A. **Natural Sciences:** Each student (except for Science and Engineering majors) must choose one Natural Science course from a list of alternative courses, with lab (4 cr. hrs.). Actuarial Science students are not exempted from this category.
 - B. **Social Sciences:** Each student must choose one course in anthropology, economics, political science, psychology, or sociology from a list of alternative courses (3 cr. hrs.).
 - C. **Humanities:** Each student must choose one course in art, art history, English and comparative literature, Egyptology, film, history, journalism, music or theater from a list of alternative courses (3 cr. hrs.)
 - D. **The Human Spirit:** Each student must choose either the Core Seminar or one course in literature, philosophy or religious studies from a list of alternative courses (3 cr. hrs.)
 - E. **Liberal Arts Elective:** Each student must choose 1 additional course (3 credits) from any of the four Liberal Arts categories above, or from among an additional list of more advanced liberal arts courses (3 cr. hrs.)

Restrictions

No course which a student employs to meet a requirement of the Core Curriculum may also be used to meet any of the requirements — including concentration requirements, specialization requirements, collateral requirements, major core requirements, concentration electives, and general electives — of that student's major. Similarly, no course that a

student employs to meet any of the requirements of a major may be used to meet any of the requirements of the Core Curriculum. In other words, *courses may not be double-counted for both Core Curriculum and major credit*. However, a student may employ a course that meets any of the requirements of the Core Curriculum to meet the requirements of a minor.

Detailed Structure

1. The Writing Program: Composition and Rhetoric, Arabic Language and Information Literacy (3-15 credit hours)

A. *The Writing Program: Composition and Rhetoric (9 credit hours)*

Students must fulfill this requirement in two ways:

1. RHET 101 Approaches to Critical Writing (3 cr.), RHET 102 Integrated Writing (3 cr.), and RHET 103 Research Writing (3 cr.).
2. RHET 102 Integrated Writing (3 cr.), RHET 103 Research Writing (3 cr.), and a 300 level writing course (3 cr.) offered in the Writing Program (e.g., RHET 320, 321, 322).

Placement of Students

Students may be exempted from one or two courses (RHET 102, 103) by a series of placement exams. These exams are administered by the Writing Program.

Dropping

Students must take the 100 level Writing Program: Composition and Rhetoric as soon as they are placed into these courses and must take them in immediate sequence. Students may not drop Writing Program: Composition and Rhetoric courses without permission from the Writing Program administrators.

RHET 101 Approaches to Critical Writing (3 credit hours)

Develops proficiency in critical expository writing, critical reading and greater fluency in expression. Focuses on the writing process with an emphasis on developing the student's voice, and organizing and developing ideas independently within the context of academic writing. Introduces library research and use of sources.

RHET 102 Integrated Writing (3 credit hours)

Develops the skills to produce effective persuasive writing with a focus on organization, content, analysis of readings, and critical thinking. Provides training in the use and integration of sources, library and online research.

RHET 103 Research Writing (3 credit hours)

Develops the skills to produce extended forms of academic essays and research papers

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with a focus on the methods of research, process of research paper writing, integration and evaluation of sources, and critical analysis. Prerequisite: RHET 102 or its equivalent.

RHET 320 Business Communication (3 credit hours)

This course focuses on the writing of professional documents, including reports, memos, business letters, and resumes. Also included is the formal presentation of professional reports. Prerequisite: RHET 103 or its equivalent.

RHET 321 Technical Writing (3 credit hours)

This course focuses on the writing of scientific and/or technical reports, memos, and technical users' documents. Particular attention is paid to technical writing in the workplace. Presentation of reports in formal settings is also covered. Prerequisite: RHET 103 or its equivalent.

RHET 322 Writing in the Humanities and Social Sciences (3 credit hours)

This course focuses on writing in the student's discipline. Particular attention is paid to the conventions of professional writing and citation, as well as a variety of approaches to delivering discipline-specific information to diverse audiences. Also included are advanced research, public writing and public presentations. Prerequisites: RHET 103 or its equivalent.

B. Arabic language (0-6 credit hours)

Since the university is set in an Arabic-language speaking milieu, it expects each student to have an appropriate knowledge of the Arabic language. All entering students, except those who have passed the Thanawiyya examination or equivalent, will take an Arabic placement exam administered by the Arabic Language Institute. Students may be required to take up to two courses in Elementary Modern Standard Arabic (ALNG 101, 102, or 103; 201, 202 or 203, etc.) based upon the results of the placement exam.

C. Information literacy (non credit)

LALT 101 Information literacy (non credit)

This is a non-credit course offered all semesters. Students may be exempted by a placement exam administered by the Information Literacy faculty during the first week of classes. This course will introduce students to the library research process emphasizing the organization, location, retrieval, and evaluation of information using print, non-print, and electronic sources. It will emphasize strategies as well as highlight specific sources. Through readings, discussions and online tutorials, students will learn to recognize and access a variety of information sources, to evaluate, use and cite these sources effectively, and to think critically throughout the entire research process.

2. Fundamental Intellectual Skills (6 credit hours)

At the heart of AUC's Core Curriculum are two courses that provide all students, regardless of current or intended major, with a common intellectual experience. All students must therefore take these two courses

PHIL 220 Critical Thinking (3 credit hours)

This course is required of all students. The purpose of this course is to develop the capacity for critical thinking. Critical thinking is that power of mind whereby we can enter skillfully into a point of view not necessarily our own, absorb it sympathetically, decipher its connections with other ideas and positions, extract consequences (intentional or unintentional), and evaluate its strengths and weaknesses. Critical thinking goes hand in hand with the enlargement of student awareness of crucial matters of human existence, such as justice, responsibility, freedom, and knowledge. This course is anchored in the conceptual discipline of philosophy. It demands close and critical reading, emphasizes cogent writing and in-class discussion, and helps students to articulate clearly their own views and respond thoughtfully to those of others.

SCI 120 Scientific Thinking (3 credit hours)

This course is required of all students. It emphasizes the unifying aspects of the scientific approach to the study of nature and human behavior. About one-third of the course is devoted to a discussion of the nature of scientific inquiry and investigation. The course focuses on the process of fact identification and concept formation and testing. In the remainder of the course students are exposed to applications of the approach in various disciplines. The course sets some of the major concepts and theories of science into a broad historical, philosophical, and cultural context and traces the development of these theories and concepts to their present status. This serves the double purpose of acquainting the students with the appropriate setting in which a given idea gains relevance and exposing them to the evolution of current methods of investigation.

3. Arab World Studies (9 credit hours)

Students must fulfill this requirement by selecting one course from each of the following three categories. In the case of categories A "Arab History" and B "Arabic Literature," students may choose from a number of possible courses. (Thanawiyya students may not choose ARBS 203, ARBS 204, or ARBS 310. They must take an Arabic literature and Arabic composition class taught in Arabic.) In the case of category C "Arab society," students may choose one course only.

A. Arab History (3 credit hours maximum). *Students may choose one of the following:*

ARBS /HIST 246 Survey of Arab History

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HIST	247	Making of the Modern Arab World
ARBS	321	Social and Cultural History of the Middle East, 600-1800 AD
ARBS	322	Land, Trade and Power: Economic Relations in the Middle East, 600-1800 AD
HIST	330	Urban Landscapes in the Modern Middle East/North Africa
ARBS	343	Arab-Islamic Civilization in the Classical Age, 600-945 AD
ARBS	344	Arab-Islamic Civilization in the Middle Period, 945-1380 AD
ARBS	345	Islamic Civilization, 1380-1800 AD
HIST/ARBS	355	State and Society in the Middle East, 1699-1914
HIST/ARBS	356	After Empire: Nationalism and Social Change in the Middle East, 1914-Present
ARBS	299	Special topics courses approved by the Core Advisory Committee
HIST	299	Special topics courses approved by the Core Advisory Committee

B. *Arabic Literature (3 credit hours maximum).* *Students must choose one of the following (Thanawiyya students may not choose ARBS 203, ARBS 204 or ARBS 310)*

ARBS	201	Introduction to Classical Arabic Literature
ARBS	202	Introduction to Modern Arabic Literature
ARBS	203	Classical Arabic Literature in Translation
ARBS	204	Modern Arabic Literature in Translation
ARBS	299	Special topics courses approved by the Core Advisory Committee
ARBS	301	Classical Tradition, I
ARBS	302	Classical Tradition, II
ARBS	303	Constructions of Modernity, I
ARBS	304	Constructions of Modernity, II
ARBS	305	Arabic Literature and Gender
ARBS	306	Arabic Literature and Film
ARBS	307	Writer and the State
ARBS	308	Colloquial and Folk Literature
ARBS	309	Selected Themes and Topics in Arabic Literature
ARBS	310	Selected Themes and Topics in Arabic Literature in Translation
ARBS	311	Classical Arabic Poetry
ARBS	312	Classical Arabic Prose
ARBS	313	Modern Arabic Poetry
ARBS	314	Arabic Novel
ARBS	315	Arabic Drama
ARBS	316	Arabic Short Story

C. Arab Society (3 credit hours maximum). Students must take the following course:

SOC / ANTH 210 Arab Society (3 credit hours). (Prerequisite: RHET 103 or concurrent)

This course offers a description and analysis of social and cultural characteristics and problems of contemporary Arab society, taking into consideration the specific historical, economic, and ideological forces that shape it. The social basis for Arab unity and identity is examined and students receive an introduction to basic concepts and principles for understanding social phenomena.

4. Liberal Arts Requirement (12-16 credit hours)

Most students are required to meet each of the following five requirements (totaling 16 credit hours). Students majoring in any of the fields of the School of Sciences and Engineering are exempted from the General Science requirement and are therefore required to complete 12 credit hours.

A. Natural Science Course with lab (4 credit hours): All students except majors in Science and Engineering must choose one of the following. Actuarial Science students are not exempted from this category.

BIOL 100	Introductory Biology
BIOL 102 & SCI 150L	Essentials of Environmental Biology
BIOL 104	Unity of Life
BIOL 105	Diversity of Life
CHEM 100 & Lab	Chemistry and Society
CHEM 104 & Lab	Man and Environment
CHEM 105 & Lab	General Chemistry
PHYS 100 & SCI 150L	Physics for Poets
SCI 109 & SCI 150L	Exploration of the Universe
SCI 140 & SCI 150L	Archaeometry
SCI 250 & SCI 251L	Introductory Geology

B. Social Science Course (3 credit hours): All students must choose one of the following:

ANTH 202	Cultural Anthropology
ANTH 299	Special topics courses approved by the Core Advisory Committee
ECON 201	Introduction to Macroeconomics
ECON 202	Introduction to Microeconomics
ECON 224	Economic History
ECON 299	Special topics courses approved by the Core Advisory Committee
EGPT 204	Archaeology and Prehistory

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POLS	201	Introduction to Political Science
POLS/HIST	206	Global Politics in the Twentieth Century
POLS	299	Special topics courses approved by the Core Advisory Committee
PSYC	201	General Psychology I
PSYC	299	Special topics courses approved by the Core Advisory Committee
SOC	201	Introduction to Sociology
SOC	299	Special topics courses approved by the Core Advisory Committee

C. Humanities (3 credit hours): All students must choose one of the following:

ARBS	206	Art and Architecture of Cairo
ARBS	270	Introduction to Islamic Art and Architecture (1)
ARBS	299	Special topics courses approved by the Core Advisory Committee
ARTV	200	Foundations of Design and Color
ARTV	201	Drawing I
ARTV	202	Painting I
ARTV	203	Introduction to Sculpture
ARTV	211	World Art Survey, 1
ARTV	212	World Art Survey, 2
ARTV	230	The Art of Photography
ARTV	299	Special topics courses approved by the Core Advisory Committee
ARTV/CENG	222	Architecture: Art or Engineering
EGPT	202	Introduction to Ancient Egypt
EGPT	299	Special topics courses approved by the Core Advisory Committee
FILM/ECLT	220	Introduction to Film
HIST	200	Introduction to Historical Theory and Methodology
HIST	201	History of American Civilization to the 19th Century
HIST	202	History of Modern American Civilization
HIST	203	Western Civilization from Antiquity to the Middle Ages
HIST	204	Early Modern Europe
HIST	205	Europe in the Age of Revolution and Reform (1789 – 1914)
HIST/ECLT	209	Introduction to American Studies
HIST	211	History in the Making
HIST	299	Special topics courses approved by the Core Advisory Committee
JRMC	200	Introduction to Mass Communication
JRMC	250	Global Media Systems

JRMC 299	Special topics courses approved by the Core Advisory Committee
MUSC 220	Introduction to Music
MUSC 260	History of Western Music I
MUSC 261	History of Western Music II
MUSC 299	Special topics courses approved by the Core Advisory Committee
THTR 203	Art of the Theatre
THTR 299	Special topics courses approved by the Core Advisory Committee

D. The Human Spirit:

This is a special category of the humanities and social sciences designed to encourage students to think broadly about the human condition and to encounter some of the greatest expressions of the human spirit. These courses are based on texts that reflect diverse perspectives and that are taken from a variety of epochs and societies. Each student must choose either the Core Seminar or one course from the following list of courses (3 cr. hrs.)

SEMR 200	Core Seminar
SEMR 299	Special topics courses approved by the Core Advisory Committee
SEMR 300	Core Honors Seminar
SEMR 310	Cross Cultural Perceptions and Representations
ARBS 320	Introduction to Sufism
ARBS 335	Introduction to Islam
ARBS/PHIL 354	Islamic Philosophy
ARBS 299	Special topics courses approved by the Core Advisory Committee
CREL 210	Religions of the World
CREL 220	Religions of India: Hinduism and Buddhism
CREL 320	Masters, Saints, and Saviors: Sacred Biography in the World's Religions
CREL 299	Special topics courses approved by the Core Advisory Committee
CREL 349	Tradition of Contemplation and Meditation in World's Religions
ECLT 200	Introduction to Literature
ECLT 201	Approaches to Literature
ECLT 202	Close Reading of Literary Texts
ECLT 299	Special topics courses approved by the Core Advisory Committee
ECLT/PHIL 344	Literature and Philosophy
ECLT 409	Greek Classics in Translation

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ECLT 410	Latin Classics in Translation
EGPT 250	Ancient Egyptian Literature in Translation
HIST/CREL 222	Zionism and Modern Judaism
LING 200	Languages of the World
LING 299	Special topics courses approved by the Core Advisory Committee
PHIL 224	Self and Society
PHIL 228	World Views
PHIL 299	Special topics courses approved by the Core Advisory Committee
PHIL 310	Philosophy and Art
PHIL 312	Classical Philosophy
PHIL 315	Ethics
PHIL 318	Theory of Knowledge
PHIL 358	Social and Political Philosophy

E. Students must select one additional course from any of the Liberal Art categories listed above or from the following list of courses. (Note: Many of the following courses carry prerequisites.)

ANTH 302	Marriage, Family and Kinship
ANTH 312	Peoples and Cultures of the Middle East and North Africa
ANTH 320	Peasants, Nomads and Rural Change
ANTH 360	Gender, Society and Social Change
ANTH/SOC 370	Environmental issues in Development
ANTH 382	Peoples and Cultures of Sub-Saharan Africa
ANTH 384	Peoples and Cultures of Latin America
ANTH 386	Peoples and Cultures of Asia
ANTH 390	Selected People and Culture Areas
ARTV 310	Modern and Contemporary Art
ARTV 314	Modern and Contemporary Architecture
ALWT 321	From Reading to Writing
ALWT 420	From Reading to Writing: Advanced Level
ALWT 421	Professional Media Writing
ALWT 422	Professional Business Writing
ALWT 423	Professional Diplomatic Writing
ARBS 271	Introduction to Islamic Art and Architecture (2)
ARBS 317	Special Studies in Arabic Texts
ARBS 323	Marriage and Family in the Medieval and Early Modern Middle East
ARBS 324	Non-Muslim Communities in the Muslim World
ARBS 325	Marginals in History and Society
ARBS/POLS 353	Muslim Political Thought
BIOL 102	Essentials of Environmental Biology

BIOL 130	Current Health Issues
BIOL 199	Special topics courses approved by the Core Advisory Committee
BIOL 210	Evolution
BIOL 306	Environmental Biology of the Red Sea
CHEM 199	Special topics courses approved by the Core Advisory Committee
CREL/HIST 398	Between Hindu and Muslim in India and Pakistan
CSCI 102	Introduction to Computers and their Applications
CSCI 201	Information Technology
ECON 239	Economic History of the Modern Middle East
ECLT 301	Medieval Literature
ECLT 302	Literature of the Renaissance
ECLT 303	Seventeenth-Century Literature
ECLT 304	Eighteenth-Century Literature
ECLT 305	Romanticism
ECLT 306	Nineteenth-Century Novel
ECLT 307	Nineteenth-Century Poetry
ECLT 308	Modern European and American Literature
ECLT 309	Early American Literature
ECLT 310	Nineteenth-Century American Literature
ECLT 311	Modern American Literature
ECLT 333	African Literature
ECLT 345	Literature and Gender
ECLT 346	Third World Literature
ECLT 348	Contemporary Literature
ECLT 352	Recurrent Themes in Drama
ECLT 353	Modern Drama
ECLT 360	Shakespeare
EGPT 243	History I: Dynastic through Middle Kingdom Egypt
EGPT 244	History II: Middle Kingdom through New Kingdom Egypt
EGPT 261	Art and Architecture of Ancient Egypt I
EGPT 262	Art and Architecture of Ancient Egypt II
EGPT 304	Culture and Society of Ancient Egypt
EGPT 342	History of Egypt in the Greco-Roman Era
EGPT 346	Societies and Cultures of the Ancient Near East
EGPT 348	Societies and Cultures of the Ancient Nubia
EGPT 445	Selected Topics in Coptic Studies
FILM 310	History of Motion Pictures
FILM/ECLT 330	Film Theory and Criticism
FILM/ANTH 341	Anthropology and Film
HIST 307	The Middle Ages, the Renaissance and the Reformation
HIST 308	Europe in the Age of Reason
HIST 309	Pursuit of Liberty

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JRMC 300	Arab Media: History, law and Contemporary Issues
LING 252	Introduction to Linguistics
MATH 100	Algebra and Trigonometry
MATH 101	Basic Mathematics for Social Sciences
MATH 131	Calculus I
MATH 199	Special topics courses approved by the Core Advisory Committee
MATH 200	Discrete Mathematics
MGMT 307	Management Fundamentals
MUSC 240	Music Theory I
PHIL 221	Informal Logic
PHIL 314	Modern Philosophy
PHIL 316	Contemporary Philosophy
PHIL 319	Development and Responsibility
PHIL 356	American Philosophy
PHIL 360	Philosophy of Language and Communications
PHIL/MATH 362	Formal and Mathematical Logic
PHIL 382	Philosophy of Science and Technology
PHIL 402	Metaphysics
PHYS 111	Classical Mechanics, Sound and Heat
PHYS 199	Special topics courses approved by the Core Advisory Committee
POLS 301	History of Political Theory, I
POLS 302	History of Political Theory, II
POLS 308	Comparative Politics of the Middle East
POLS 310	Introduction to Development
POLS 322	Comparative Government and Politics: Developed Systems
POLS 323	Comparative Government and Politics: Developing Systems
POLS 324	Comparative Government and Politics in Contemporary Eastern Europe and Russia
POLS 325	Government and Politics of Egypt
POLS 354	Political and Social thought in the Modern Arab World
PSYC 202	General Psychology II
SCI 105	Science and Technology of Ancient Egypt
SCI 199	Special topics courses approved by the Core Advisory Committee
SOC 203	Social Problems of the Middle East
SOC 206	Arab Family Structure and Dynamics
SOC/ANTH 303	Social Movements
SOC 306	Sociology of Literature
SOC 307	Social Class and Inequality
SOC/ANTH 321	Urban Society in Transition
SOC/ANTH 332	Race, Ethnic, and Minority Relations
THTR 224	Introduction to Design for the Theatre
THTR/ECLT 350	History of Theatre and Drama, I
THTR/ECLT 351	History of Theatre and Drama, II

Core Seminars: Descriptions

Included in the "Human Spirit" category above are a series of SEMR courses. These courses are based on texts that reflect diverse perspectives and that are taken from a variety of epochs and societies. Students are exposed to various interpretations of these texts through discussions in small tutorials and / or encounters in large lectures. The adopted formats allow ample opportunity for students to explore, reflect and express the way they relate to the experiences contained in various texts through various discussions and writing assignments.

SEMR 200 Core Seminar (3 credit hours)

The Seminar is an interdisciplinary course in the humanities, natural sciences and social sciences. Its goal is to foster the critical interpretation of texts. In this course, students read a variety of texts from different disciplines in an attempt to explore new ideas and new approaches to knowledge. Each week, students attend general lectures and then meet with their tutors in small groups to discuss the reading. The Seminar is an integral part of AUC's program of liberal education. By asking questions about human nature, society, culture, and the natural and supernatural worlds, students will develop their critical-analytical skills and broaden their understanding of themselves and the world in which they live. Prerequisites: PHIL 220

SEMR 299 Selected topic (3 credit hours)

A course addressing broad intellectual concerns and accessible to all students, irrespective of major.

SEMR 300 Core Honors Seminar (3 credit hours)

Core Honors Seminar (SEMR 300) is an interdisciplinary honors course. The focus of Core Seminar 300 is the critical exploration of ideas stemming from a selection of texts representing a variety of cultural traditions both past and present. Because Core Seminar 300 is an honors course, students will be expected to demonstrate skills and a degree of commitment that are more advanced than those normally associated with other 300-level courses. Prerequisites: consent of Core Seminar Supervisor. Grading in this course is on a "Pass/ Fail" system.

SEMR 310 Cross-Cultural Perceptions and Representations (3 credit hours)

Examination of the question of the "Other," based on an interdisciplinary approach. This course will raise historical, political, sociological and anthropological questions concerning the perceptions and representations of Middle Eastern, American, and European societies. The course is structured on the basis of regular dialogues with students in foreign institutions through intensive e-mail exchange as well as videoconferences. These encounters will be structured around texts that would vary from one semester to another, but would all be relevant to the examined theme.

FIELDS OF UNDERGRADUATE STUDY: ACADEMIC DEGREES & COURSE LISTINGS

This section lists the fields of undergraduate study that are currently offered at the American University in Cairo. The fields are given in alphabetical order irrespective of the department in which they are offered and regardless of whether they cover a degree program, a minor or a specialization within a degree program. Entries under fields of study in which a degree is offered include faculty names, introduction to the field, objectives and main features of the degree, requirements for the degree, as well as a listing of courses and their description. Titles of minors and areas of specialization are listed according to the alphabetical order, but the reader is referred to the main field for requirements and course description. Entries under interdisciplinary fields of study include the names of faculty involved and requirements but the reader is referred to main fields of study for course description.

Courses are identified by a prefix, which is related to the department offering the course, and a number, which describes the level of the course. Courses numbered 100-199 are freshman-level courses normally not open to juniors or seniors. Courses numbered 200-299 and 300-399 are normally taken by sophomore and junior students. Courses numbered 400-499 are designated for seniors, although superior students of sophomore or junior standing may be admitted by permission of the department offering the course. Also, in some departments, graduate students may earn a limited number of credits in 400-level courses.

Courses numbered 500-599 are listed in the graduate section and are open to graduate students; however, a senior student who has a B average may take two graduate courses, not exceeding six credits, either for graduate credit or for completion of requirements for the bachelor's degree. In this case the chair of the department concerned must notify the registrar's office. Students in the five-year bachelor of science program in Mechanical Engineering are permitted other exceptions.

The departmental prefixes used in labeling courses are given below:

Accounting	ACCT	History	HIST
Anthropology	ANTH	International Business	INTB
Arabic Language	ALNG	Journalism & Mass	
Arabic Language Intensive	ALIN	Communication	JRMC
Arabic Studies	ARBS	Linguistics	LING
Arabic Writing Courses	ALWT	Management	MGMT
Art	ARTV	Management	
Biology	BIOL	of Information Systems	MOIS
Chemistry	CHEM	Marketing	MKTG
Comparative Religion	CREL	Mathematics	MATH
Composition & Rhetoric	RHET	Mechanical Engineering	MENG
Computer Science	CSCI	Middle East Studies	MEST
Construction Engineering	CENG	Music	MUSC
Economics	ECON	Philosophy	PHIL
Egyptology	EGPT	Physics	PHYS
Electronics Engineering	EENG	Political Science	POLS
Engineering	ENGR	Production/Operation	
English	ENGL	Management	OPMG
English & Comparative		Psychology	PSYC
Literature	ECLT	Public Administration	PADM
English Language Intensive	ELIN	Science	SCI
Film	FILM	Sociology	SOC
Finance	FINC	Theatre	THTR

Not all departmental prefixes represent fields in which a degree is offered; some represent minors and others only courses.

Note Concerning Course Schedules

Most course descriptions indicate the semester that each course is usually offered, but this information is subject to change and some courses are not taught every year. The registrar's office distributes a detailed schedule of courses offered at the beginning of each semester which contains accurate information on which courses are offered, at what time and by whom they are taught.

For long-term planning, students should consult their advisers and/or individual departments for help designing their programs of study. Students coming from the United States, especially year-abroad students, should contact the university's office in New York for current information about specific course offerings.

UNDERGRADUATE PROGRAMS

This section describes the undergraduate programs currently offered in the American University in Cairo. The programs are presented according to the following alphabetical order:

Accounting

Major & Minor-See Management for description.

Actuarial Science

Major-See Mathematics for description

African Studies

Minor

American Studies

Minor

Anthropology

Major & Minor

Applied Probability and Statistics

Minor- See Mathematics for description

Arab and Islamic Civilization

Minor – See Arabic Studies for description

Arabic Language

Courses-See Arabic Language Institute for description

Arabic Literature

Minor – See Arabic Studies for description

Arabic Studies

Major

Archaeological Chemistry

Minor- See Chemistry for description

Architectural Design

Minor - See Construction Engineering

Art

Major & Minor

Biology

Major & Minor

Business Administration

Major & Minor- See Management for description

Chemistry

Major & Minor

Classical/Medieval Islamic History

Minor- See Arabic Studies for description

Comparative Religion

Courses- See History for description

Computer Science

Major & Minor

Construction Engineering

Major

Coptic Studies

Minor - See Egyptology for description

Development Studies

Minor

Economics

Major & Minor

Egyptology

Major & Minor

Electronics

Minor

Electronics Engineering

Major

Engineering

Courses- See Interdisciplinary Engineering Programs for description

English and Comparative Literature

Major & Minor

English Language

Courses-See English Language Institute

Environmental Science

Minor

European-World History

Minor- See History for description

Film

Minor

Gender Studies

Minor

History

Major & Minors

Information Systems

Minor- See Management for description

International Relations

Minor- See Political Science for description

Islamic Art and Architecture

Minor- See Arabic Studies for description

Islamic Studies

Minor- See Arabic Studies for description

Journalism & Mass Communication

Major & Minor

Linguistics

Minor

Management

- Accounting (Major & Minor)
- Business Administration (Major & Minor)
- Information Systems (Minor)

Mathematics

Major & Minor

Mechanical Engineering

Major

Middle East Politics

Minor- See Political Science for description

Middle East Studies

Major

Modern History

Major & Minor- See History for description

Modern Middle Eastern History

Minor- See History for description

Music

Minor

Philosophy

Major & Minor

Physics

Major & Minor

Political Economy

Minor – See Political Science for description

Political Science

Major & Minor

Psychology

Major & Minor

Science

Courses- See Chemistry for description

Sociology

Major & Minor

Theatre

Major & Minor

United States History

Minor- See History for description

Writing Program: Composition and Rhetoric

Courses - See English and Comparative Literature, Writing Program for description

Language Institutes**Arabic Language Institute**

Description includes Arabic Language and Intensive courses

English Language Institute

Description of intensive English courses and ENGL 100

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Accounting

Major and Minor - See Management

Actuarial Science

Major - See Mathematics

AFRICAN STUDIES

Office of African Studies

School of Humanities and Social Sciences

Professors: F. Ghazoul, N. Hopkins, A. Lesch

Associate Professors: K. Myambo, I. El-Nur (Director), E. Shahin

African studies utilizes a variety of disciplinary tools, particularly those in the social sciences and humanities, to understand the realities facing individuals, groups, and states in contemporary Africa. The field is by its very nature comparative, juxtaposing one part of the continent to another, and comparing the African experience to that of other parts of the world.

Minor

The minor in African Studies provides undergraduate students with an interdisciplinary introduction to one of the parts of the world in which they live and of which Egypt has long been a part. As such, the minor in African Studies builds upon AUC's existing strengths, particularly with regard to the study of Africa, and fosters the systematic comparison of African societies as well as the study of those inter-African ties which transcend the Sahara and bind the continent together.

The minor in African Studies is comprised of five courses taken from at least three different disciplines. Four of the courses must be taken from disciplines outside of the student's major. Three of the four courses must be taken from the core undergraduate and graduate courses listed below, and one of the three must be the Seminar in African studies. Additional courses may be taken from the list of core courses, courses not regularly offered which deal specifically with Africa, or upon special petition, topics courses in which the students have written research papers on Africa. Petitions must include copies of the papers which students wrote and are submitted through the Director of African Studies to the University's Committee on African Studies. Because of the intended pan-African nature of the minor, students will be required to demonstrate that some of their course work has included northern Africa. Because of the extensive coverage of Egypt in the AUC curriculum, courses which focus upon Egypt will not count towards this requirement.

Core Undergraduate Courses:

ANTH	382	Cultures of Sub-Saharan Africa
POLS	305	Introduction to Africa
POLS	423	Political Economy of North Africa
POLS	455	Seminar in African Studies
SOC/ANTH	455	Seminar in African Studies
ECLT	202	Close Readings of Literary Texts
ECLT	333	African Literature

Core Graduate Courses:

PADM	516	Comparative Administration
POLS	545	Politics and Development in Sub-Saharan Africa
POLS	551	African International Relations

AMERICAN STUDIES

School of Humanities and Social Sciences

Professors: D. Cole, E. Wolf-Gazo, J. Edwards, K. Dwyer, D. Tschirgi, G. Johnson (Executive Director of Center for American Studies and Research-Coordinator)

Associate Professors: D. Blanks, M. El Lozy, R. Switzer, E. Shahin

Assistant Professors: A. Abdel Aziz, C. Haines, D. Sweet, H. Alvi, H. Rizzo, J. Walwik, L. Tatom, R. Berenger, S. Germic, M. El-Shorbagy (Academic Director of Center for American Studies and Research-Coordinator)

Minor

The minor in American Studies at AUC is an interdisciplinary program in which students take a minimum of five courses (15 credits) among specified offerings involving the study of the history or culture of the United States and the Americas. The program is staffed and supervised by members of several departments. Students are required to take ECLT/HIST 209 (Introduction to American Studies), at least one other American history course, and three other courses as electives from among courses offered in American literature, history, and philosophy, or from among courses on American issues and topics in anthropology, art, music, film, theater, history, sociology, psychology, and political science. Courses listed under the heading "Selected Topics" may be included if the focus is the United States and the Americas.

Requirements:

ECLT/HIST	209	Introduction to American Studies, 3 cr.
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and at least **four** of the following:

ANTH	384	Cultures of Latin America, 3 cr.
	390	Selected People and Culture Areas*, 3 cr.
ANTH	400	Selected Topics in Anthropology*, 3 cr.
ART	310	Modern and Contemporary Art, 3 cr.
	370	Selected Topics in Art*, 3 cr.
ECLT	308	Modern European and American Literature, 3 cr.
	309	Early American Literature, 3 cr.
	310	Nineteenth-Century American Literature, 3 cr.
	311	Modern American Literature, 3 cr.
	344	Literature and Philosophy*, 3 cr.
	347	Selected Topics*, 3 cr.
	540	Readings in American Literature *, 3 cr.
	545-546	Selected Topics**, 6 cr.
FILM	370	Selected Topics in Film**, 3 cr.
HIST	201	History of American Civilization to the Nineteenth Century, 3 cr.
	202	History of Modern American Civilization, 3 cr.
	309	The Pursuit of Liberty, 3 cr.
	401	Selected Topics in the History of the United States, 3 cr.
	356	American Philosophy, 3 cr.
PHIL	303	American Government, 3 cr.
	415	U.S. Foreign Policy, 3 cr.
	430	Special Topics in Political Science*, 3 cr.
	473	Special Topics in Public Law*, 3 cr.
SOC		(e.g. American Constitutional Law)
	307	Social Class and Inequality*, 3 cr.
	321	Urban Society in Transition*, 3 cr.
	332	Race, Ethnic, and Minority Relation*, 3 cr.
	400	Selected Topics in Sociology*, 3 cr.
	402	Independent Study*, 1-3 cr.
	405	Industrial Sociology*, 3 cr.
	408	Criminology*, 3 cr.
THTR	370	Selected Topics in Theatre*, 3 cr.
MUSC	370	Selected Topics in Music/American Music*, 3 cr.

* when instructor and the Dean of HUSS deem course content appropriate

† with permission of the instructor

See departmental announcements or AUC Catalog entries under departmental headings for complete course descriptions.

ANTHROPOLOGY

Department of Sociology, Anthropology, Psychology, and Egyptology
School of Humanities and Social Sciences

Professors: S. Altorki, D. Cole, K. Dwyer, C. Haines, N. S. Hopkins, C. Nelson

Anthropology is the comparative study of peoples, societies, and cultures in all their variations across time and space. It has roots in the natural and social sciences and in the humanities and is concerned with all aspects of human life. Anthropology addresses the evolution and biological unity of humankind, as well as the changing diversities that characterize human cultures and societies. Anthropology at AUC focuses on cultural and social anthropology. It engages in basic and applied research and in scholarly interpretation and also offers critical, reflexive, and empirical perspectives on past and present societies.

Bachelor of Arts

The undergraduate program aims to present the main themes and trends in cultural and social anthropological thought and practice and thereby to nurture critical, intercultural, and reflexive perspectives as part of liberal education. In so doing, it seeks to foster understanding of the transformation of society and culture in Egypt and the region. The program also prepares students for graduate studies and for living and working in an increasingly complex and changing world.

A student who wishes to declare a major in anthropology should be registered in or have taken ANTH 202. Every student must obtain a "C" or higher in ANTH 202 in order to continue as a major in anthropology.

Upper-division (300-400 level) courses are normally taken during the junior and senior years. Students must take ANTH 309 and ANTH 311 during the junior year. Students must take ANTH 495 in their last full academic year. Most of the other courses are offered in alternate years and so may be taken in any order. Courses at the 500-level are also open to selected advanced undergraduates.

A total of 120 credits is required for the bachelor's degree in anthropology:

Core Curriculum (34-46 credits)

Students with Thanawiya'Amma art or equivalent background should take BIOL 100 (Introductory Biology); those with Thanawiya'Amma science or equivalent must take BIOL 104 (Unity of Life).

Concentration Requirements (42 credits)

ANTH	202	Cultural Anthropology, 3 cr.
	309	History of Social Theory *, 3 cr.

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ANTH	311	Contemporary Anthropological Theory *, 3 cr.
	380	Fieldwork Methods, 3 cr.
	495	Senior Seminar *, 3 cr.

One of the following social organization courses:

ANTH	302	Marriage, Family, and Kinship, 3 cr.
	360	Gender, Society, and Social Change, 3 cr.

One of the following people-and-culture courses:

ANTH	312	Peoples and Cultures of the Middle East and North Africa, 3 cr.
	382	Peoples and Cultures of Sub-Saharan Africa, 3 cr.
	384	Peoples and Cultures of Latin America, 3 cr.
	386	Peoples and Cultures of Asia, 3 cr.
	390	Selected People and Culture Areas, 3 cr.

Seven additional anthropology courses, of which three must be at the 400 level.

Collateral Requirements (21 credits)

Two 300 or 400 level courses in the social sciences

A minor (five courses) in any field to be selected in consultation with the advisor.

Electives (11-23 credits)

Total 120 Credits

* Cross listed with Sociology

Minor

The minor in anthropology provides students with a basic knowledge of anthropological method and theory from a cross-cultural perspective on selected aspects of the world's cultures and societies.

Fifteen credits are required for the minor in Anthropology: ANTH 202, 380 and three additional anthropology courses of which at least one must be at the 400-level.

Anthropology Courses (ANTH)

202 Cultural Anthropology (3 cr.)

Offered in fall and spring.

Introduction to the anthropological point of view through the study of the range and variation of human cultures. Emphasis on the dynamic interaction and interpenetration of personality, society and culture.

210 Arab Society (3 cr.)

Same as SOC 210. Offered in fall and spring.

Description and analysis of social and cultural characteristics and problems of contemporary Arab Society, taking into consideration the specific historical, economic, and ideological forces that shape it. The social basis for Arab unity and identity. Introduction to basic concepts and principles for understanding social phenomena.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

302 Marriage, Family and Kinship (3 cr.)

Prerequisite: ANTH 202. Offered in alternate years.

Cross-cultural treatment of kinship, marriage, and the family. Origins of human society. Emphasis on cross-cultural studies of sex roles of non-literate, changing and modern societies.

303 Social Movements (3 cr.)

Same as SOC 303. Prerequisites: 6 hours of social sciences and at least sophomore standing. Offered in spring

Basic processes by which societies initiate, consolidate, transform, and change their basic institutions and social structures. Anatomy of reform and revolutionary social movements, especially those affecting Arab and Third World societies.

309 History of Social Theory (3 cr.)

Same as SOC 309. Prerequisites: 9 hours of social sciences and junior or senior standing, or consent of instructor. Offered in fall.

The nature and function of social theory and its development especially since the Enlightenment. Emphasis on the cumulative insights and ideas which have contributed to modern social theory. The essential aspects of the philosophy of social science, especially epistemological problems in the sciences of sociology and anthropology.

310 Contemporary Sociological Theory (3 cr.)

Same as SOC 310. Prerequisite: ANTH/ SOC 309 or consent of instructor. Offered in spring.

The main trends, basic problems, and unresolved issues of post-war sociological thought. Essential aspects of the logic of scientific inquiry; contemporary theories as model building in sociology including new functionalism, critical theory, structuralism and poststructuralism.

311 Contemporary Anthropological Theory (3 cr.)

Same as SOC 311. Prerequisite: ANTH/SOC 309 or consent of instructor. Offered in spring.

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Introduces major theories and theorists in the recent history of anthropology and provides a broad vision of the development of the discipline and of contemporary anthropological thought. The course also covers the development of the ethnographic method, important paradigms such as structural-functionalism, and recent critical theory.

312 Peoples and Cultures of the Middle East and North Africa (3 cr.)

Prerequisite: ANTH 202 or SOC 201. Offered in fall and spring.

Basic structure of contemporary societies and cultures of the Middle East and North Africa, with special emphasis on the Arab population. Problems of ecology, economics, social organization, law and politics, religion and patterns of social change.

320 Peasants, Nomads and Rural Change (3 cr.)

Prerequisite: ANTH 202 or SOC 201. Offered in alternate years.

Political economies of crop production and livestock raising among small-scale producers in complex societies before and since the emergence of capitalism. Impacts of colonialism, the contemporary world system and expanding urban-centered national economies, politics, and cultures on peasant and pastoral communities. Changing patterns of family life, gender relations, community organization, law and politics, education and health practices, migration and occupational mobility, religious belief and practice, social identities, and similar topics are discussed with special reference to rural folk in southwestern Asia, northern Africa and southern Europe.

321 Urban Society in Transition (3 cr.)

Same as SOC 321. Prerequisites: 6 hours of social sciences, and at least sophomore standing. Offered in spring.

The nature of urban society: occupation and population trends, residential and work patterns in traditional and modern cities, rural-urban migration, patterns of urban conflict. Problems arising from the growth of modern town and city life. City planning in regard to social and industrial change.

332 Race, Ethnic, and Minority Relations (3 cr.)

Same as SOC 332. Prerequisite: 6 hours of social sciences, and at least sophomore standing. Offered occasionally.

Comparative study of race, ethnic and other types of categorizations of people within complex societies. Focus on the nature of ethnic identity and change, stratification, competition, conflict, and accommodation.

341 Anthropology and Film (3 cr.)

Same as FILM 341. Prerequisite: ANTH 202. Offered occasionally.

The history and practice of film in anthropology; film as ethnography; comparison of films and analytical ethnographies.

352 Language in Culture (3 cr.)

Same as LING 352. Prerequisite: LING 252 or consent of instructor. Offered occasionally. The role played by language in humankind's symbolic relation to the world. Emphasis on linguistic analysis, ethnosemantics, sociolinguistics, expressive speech and

language and socialization as these elucidate patterns of cognitive orientation.

360 Gender, Society and Social Change (3 cr.)

Prerequisite: ANTH 202 or consent of instructor. Offered in alternate years.

An introduction to the awareness of gender as a theoretical concept in the understanding and analysis of society and social change. Comparative examination of how culture constructs our notions of male and female, masculine and feminine and the various forms of the division of labor. Special emphasis on gender relations under conditions of social transformation and development.

370 Environmental Issues in Development (3 cr.)

Same as SOC 370.

This course examines issues of environment in the context of development. It includes both the technical aspects of environmental studies and the social and cultural dimensions, linked through the notion of sustainability. Case studies include examples where development has led to the deterioration of the environment, or where it has enhanced it. Major issues include the question of water supply (scarcity) in the Nile Valley and in Palestine, urban pollution, nuclear energy, global warming and the ozone layer, tourism and development. The course takes social, cultural and political factors into account.

372 Applied Anthropology (3 cr.)

Prerequisite: ANTH 202. Offered in alternate years.

Cultural dynamics involved in social and economic change with special reference to Egypt and the Middle East. Community development, cooperatives, population studies, resettlement, health and education are some of the problems that may be discussed. Case studies and fieldwork.

380 Fieldwork Methods (3 cr.)

Prerequisite: ANTH 202 and 6 credit hours of social sciences. Offered in fall and spring.

Logic and philosophy of qualitative methodology in anthropology and other social sciences. The process of research design, data collection, analysis and interpretation of results and final write-up is elaborated with specific reference to research conducted in Egypt, the wider Arab and Middle Eastern worlds and elsewhere. Discussion of the politics and ethics of fieldwork, including protection of the rights of human participants in research projects.

382 Peoples and Cultures of Sub-Saharan Africa (3cr.)

Prerequisite: ANTH 202 or consent of instructor. Offered in alternate years.

Basic structure of contemporary societies and cultures of sub-Saharan Africa with special emphasis on problems of ecology, economics, social organization, law and politics, religion, and patterns of social change.

384 Peoples and Cultures of Latin America (3 cr.)

Prerequisite: ANTH 202 or consent of instructor. Offered in alternate years.

Basic structure of contemporary societies and cultures of Latin America with special

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emphasis on problems of ecology, economics, social organization, law and politics, religion, and patterns of social change.

386 Peoples and Cultures of Asia (3 cr.)

Prerequisite: ANTH 202 or consent of instructor. Offered in alternate years.

Basic structure of contemporary societies and cultures of South, South-East, and East Asia with special emphasis on problems of ecology, economics, social organization, law and politics, religion and patterns of social change.

390 Selected People and Culture Areas (3 cr.)

Prerequisite: ANTH 202 or consent of instructor. Offered occasionally.

Areas to be chosen according to specific interest and faculty expertise. Examples of possible areas are: peoples and cultures of the ancient world, of the Mediterranean, and of the United States. May be taken for credit more than once if content changes.

400 Selected Topics in Anthropology (3 cr.)

Prerequisites: 9 hours of social sciences, and junior or senior standing. Offered occasionally.

Topics to be chosen according to specific interest, such as: agrarian transformation, desert development, sex roles, cognitive anthropology, anthropology and education; nationalism, colonialism and postcolonialism; tourism in social science; and anthropology of the city. May be taken for credit more than once if content changes.

402 Independent Study (1-3 cr.)

Prerequisites: a minimum B average, consent of the instructor, and approval by the unit head and the department chair. Offered in fall and spring.

In exceptional circumstances some senior majors with departmental approval may arrange to study beyond the regular course offerings. May be repeated for credit more than once if content changes.

407 Psychological Anthropology (3 cr.)

Same as PSYC 407. Prerequisites: 6 hours of anthropology, 6 hours of psychology, and junior or senior standing. Offered in alternate years.

Interdisciplinary and cross-cultural approach to the study of the reciprocal relations of culture and personality; special focus on themes of identity, socialization and the emergence of self in various cultural settings.

422 Religious and Symbolic Systems (3cr.)

Same as SOC 422. Prerequisites: 9 hours of social sciences and junior or senior standing. Offered in fall.

Cross-cultural study of religion as a symbol system and its relationship to social action. Major anthropological theories as they relate to primitive and historic religions and to contemporary trends in religious expression. Cosmology and symbol systems, ritual and power, values, ecstatic religion. The individual and belief and the relationship between religion and culture as a shared system of meaning.

425 Women, Islam and the State (3 cr.)

Prerequisite: 6 hours of anthropology and/or sociology or consent of the instructor. Offered annually.

An anthropological perspective on the politics in Muslim societies, with an emphasis on the Middle East. The relationship between religion and society, especially the cultural construction of gender hierarchies within the discourses of Islam and the realities of Muslim women's lives. The articulation of the impact of modern states on gender hierarchies.

445 Selected Topics in Coptic Studies (3 cr.)

Same as ARBS, EGPT, HIST, SOC 445. Offered in fall.

This course allows instructors to offer a topic in Coptic Studies. The topic will be chosen from year to year in coordination with the departments concerned and the dean of the School of HUSS, and according to the individual interests and areas of expertise of the instructors. Topics chosen may include various aspects of Coptic art and history, monasticism, folklore, or other subjects. The course may be taken more than once if the topic changes. Students in these majors may petition preferably before registration to have the course included in their major requirements.

450 Third World Development (3 cr.)

Same as SOC 450. Prerequisites: 9 hours of social sciences and junior or senior standing. Offered in fall and spring.

Contemporary theories of development as they apply to and illuminate the problems of development in underdeveloped countries. The approach will be interdisciplinary.

455 Seminar in African Studies (3 cr.)

Same as SOC/POLS 455. Prerequisite: Junior or Senior standing and consent of the instructor. Offered occasionally.

Through the examination of a contemporary topic in African Studies, this interdisciplinary seminar examines epistemological and methodological issues in African Studies such as transformation, resistance, power, technology, and women and development. Original sources will be used to examine the theoretical assumptions, data and methods underlying the literature. Prior course work in African Studies is recommended.

460 Development Studies Seminar (3 cr.)

Same as ECON/POLS/SOC 460. Prerequisites: 12 hours of social science courses. Offered occasionally.

Interdisciplinary and comparative analysis of development as a process and as a historical phenomenon. Critical evaluation of economic, political, social and cultural technological and managerial factors that structure developmental change.

462 Economic Anthropology (3 cr.)

Prerequisites: 9 hours of social sciences and junior or senior standing. Offered in alternate years.

Comparative examination of kin-ordered, tributary, and capitalist modes of production and of their various articulations. Reciprocity, redistribution, and markets as principles of exchange, and the interrelationships between ecology, economy, polity, society, and culture. Consumption as means to meet utilitarian needs and as a mode for the communication of socially relevant information. Culture and the identification and handling of waste. Formalist and substantivist definitions of economy,

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formal and informal economic organizations, the extension of market-derived discourse to social and cultural domains and similar topics are discussed.

492 Political Anthropology (3 cr.)

Prerequisites: 6 hours of anthropology or political science, and junior or senior standing. Offered in alternate years.

Contribution of anthropology to the comparative study of politics. Politics in hunting-and-gathering and horticultural societies. Non-Western ("primitive") states. Peasant-state relations. The politics of social change in developing areas. Emphasis on theoretical perspectives.

495 Senior Seminar (3 cr.)

Same as SOC 495. Prerequisite: SOC 381 or ANTH 380 and senior standing or consent of the instructor. Offered in spring.

Emphasis on current methodological trends in anthropology and sociology reflecting the research interests of the faculty and students, and drawing on the experience of the undergraduate career. Content may therefore vary from year to year. The student will be required to write a methodologically sound senior paper, preferably based on field research.

Applied Probability and Statistics

Minor - See Mathematics

Arab and Islamic Civilization

Minor - See Arabic Studies

Arabic Language

Courses - See Arabic Language Institute

Courses in the Arabic language are taught in the Arabic Language Institute. A list of those courses can be found in section VII of the undergraduate studies listing, under Arabic Language Institute. Courses under the heading of ALNG are intended for AUC undergraduates who are attempting to meet the Arabic language requirement and for non-degree students who want to take courses in Arabic along with their regular courses. Courses under the heading of ALIN are courses in the intensive Arabic program, intended for students who are devoting full-time to the study of the Arabic language. Some courses under both categories are taught in the summer and winter semesters.

Arabic Literature

Minor - See Arabic Studies

ARABIC STUDIES

Department of Arabic Studies
School of Humanities and Social Sciences

Professor Emeritus: H. Sakkout

Professors: N. Hanna (Sabbatical), B. O'Kane, M. El Rabie, G. Scanlon, M. Serag

Associate Professor Emeritus: E. Sartain

Associate Professors: E. Fernandes (Chair), H. Lutfi, S. Mehrez, M. Birairi

Assistant Professors: M. Badrawi, M. Malczycki, R. McKinney

The department of Arabic Studies provides a multi-disciplinary framework for the study of the history and culture of the Middle East since the rise of Islam. It seeks to explain the thought, movements, processes, institutions and identities of Arab-Islamic civilization. These include but are not limited to aesthetic and intellectual production, political and religious thought, cross-cultural interaction, commerce and economic relations, government, and social, political and religious loyalties. The study and appreciation of these fields forms an important part of the university's mission to give students greater awareness and appreciation of the heritage of the Middle East.

Bachelor of Arts

The objective of the Bachelor of Arts is to develop a broad awareness of Arab-Islamic civilization and to develop in students the ability to examine critically the different aesthetic, intellectual and cultural components of this civilization. Each student is required to fulfill Arabic language requirements and take a common core of courses from Arabic Literature, Islamic Studies, Middle Eastern History and Islamic Art and Architecture. Students should find opportunities in any line of work where knowledge of Middle Eastern culture or analytical and communication skills are important.

A total of 120 credits is required for the degree in Arabic Studies.

Language Requirements

Students must demonstrate their proficiency in Arabic at the advanced level, either by completing ALNG 312 or its equivalent, or by taking a proficiency test, or by holding the Thanawiya 'Amma. Students must reach this level of proficiency before their senior year. The department may give permission for deferral until the senior year in exceptional cases. However, students should note that advanced-level proficiency is a prerequisite for enrollment in certain Arabic literature courses, as described below. Students who are required to take Arabic language proficiency courses may use a maximum of 15 hours of their elective credits to take language courses in Intermediate or Advanced Arabic. Elementary Arabic courses may not be taken for credit.

Students should have the Thanawiya 'Amma certificate, evidence of advanced-level proficiency or consent of instructor before enrolling in any Arabic literature course which

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is taught in Arabic, or in ARBS 317 and 417, for which the readings are in Arabic.

Core Curriculum (34-46 credits)

ARBS majors must fulfill their Core Curriculum Arab History and Arabic Literature requirements by taking any 300-level Arabic literature course and any Middle Eastern history course from the core curriculum list other than ARBS 343. They should take the introductory 200-level courses required by their major before fulfilling their Core Curriculum requirements.

Concentration requirements (48 credits)

All students must take 24 credit hours as follows:

Arabic literature (6 credits)

- EITHER ARBS 201 Introduction to Classical Arabic Literature, 3 cr.
and ARBS 202 Introduction to Modern Arabic Literature, 3 cr.
OR ARBS 203 Classical Arabic Literature in Translation, 3 cr.
and ARBS 204 Modern Arabic Literature in Translation, 3 cr.

Middle Eastern history (6 credits)

- ARBS 246 Survey of Arab History, 3 cr.
343 Arab-Islamic Civilization in the Classical Age,
600-945 A.D., 3 cr.

Islamic Studies (6 credits)

- ARBS 335 Introduction to Islam, 3 cr.
435 Studies in the Qur'an, 3 cr.

Islamic Art and Architecture (6 credits)

- ARBS 206 Art and Architecture of the City of Cairo, 3 cr.
270 Introduction to Islamic Art and Architecture I, 3 cr.

Each student must take another **24 credits** of ARBS courses, chosen with the help of the advisor. These must include two additional 400-level courses. Students may, if they wish, take a specialization in Middle Eastern History or in Arabic Literature.

Specialization in Middle Eastern History

Students who wish to specialize in this field must take a minimum of 18 of these 24 credits in Middle Eastern history, medieval and modern. These must include two 400-level courses, and at least one course on modern Middle Eastern history. Students may choose from among the following courses offered by the Department of Arabic Studies (ARBS) and by the Department of History (HIST):

- | | | |
|------|-----|---|
| ARBS | 320 | Introduction to Sufism, 3 cr. |
| | 321 | Social and Cultural History of the Middle East,
600-1800 A.D., 3 cr. |

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ARBS	322	Land, Trade and Power: a History of Economic Relations in the Middle East, 600-1800 A.D., 3 cr.
	323	Marriage and the Family in the Medieval and Early Modern Middle East, 3 cr.
	324	Non-Muslim Communities in the Muslim World, 3 cr.
	336	Studies in Ibn Khaldun, 3 cr.
	344	Arab-Islamic Civilization in the Middle Period, 945-1380 A.D., 3 cr.
	345	Islamic Civilization, 1380-1800 A.D., 3 cr.
	353	Muslim Political Thought, 3 cr.
	404	Sira, Hadith and Tafsir, 3 cr.
	439	Islamic Law, 3 cr.
	440	Arabic Historical Literature, 3 cr.
	451	Islamic Institutions, 3 cr.
	460	Selected Topics in Middle Eastern History, 600-1800 A.D., 3 cr.
	463	Selected Topics in the History of Islamic Thought and Institutions, 3 cr.
HIST	355	History of the Modern Middle East, 1700-1900, 3 cr.
	356	History of the Middle East in the Twentieth Century, 3 cr.
	454	Modern Movements in Islam, 3 cr.
	462	Selected Topics in the History of the Modern Middle East, 3 cr.

Specialization in Arabic Literature

Students who wish to specialize in this field must take a minimum of 18 of these 24 credits in Arabic literature, chosen from the list below. It is expected that these courses will be taken in Arabic. However, a student may take up to two Arabic literature courses taught in English, on condition that he/she reads the assigned texts in Arabic. In such cases, the course will be registered for that student under the rubric ARBS 317 or 417, Special Studies in Arabic Texts, as appropriate.

ARBS	301	The Classical Tradition I, 3 cr.
	302	The Classical Tradition II, 3 cr.
	303	Constructions of Modernity I, 3 cr.
	304	Constructions of Modernity II, 3 cr.
	305	Arabic Literature and Gender, 3 cr.
	306	Arabic Literature and Film, 3 cr.
	307	The Writer and the State, 3 cr.
	308	Colloquial and Folk Literature, 3 cr.
	309	Selected Themes and Topics in Arabic Literature, 3 cr.
	310	Selected Themes and Topics in Arabic Literature in Translation, 3 cr.
	311	Classical Arabic Poetry, 3 cr.
	312	Classical Arabic Prose, 3 cr.
	313	Modern Arabic Poetry, 3 cr.
	314	The Arabic Novel, 3 cr.
	315	Arabic Drama, 3 cr.

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ARBS	316	The Arabic Short Story, 3 cr.
	401	Senior Seminar in Arabic Texts, 3 cr.
	402	Senior Seminar in Arabic Literature in Translation, 3 cr.
	403	Arabic Literary Criticism, 3 cr.

Electives (26 - 38 credits).

Depending on the number of credits needed to complete the 20 credits, the student is strongly advised to use some of their electives to take a suitable minor or minors. As stated above, he/she may use up to 15 credit hours to satisfy Arabic language requirements for the ARBS degree.

Arab and Islamic Civilization Minor

Requirements (15 credits): Any five courses offered by the department (ARBS).

Arabic Literature Minor

Requirements (15 credits): 5 courses in Arabic or in English from the following, depending on the student's area of interest. ARBS 301 The Classical Tradition I, ARBS 302 The Classical Tradition II, ARBS 303 Constructions of Modernity I, ARBS 304 Constructions of Modernity II, ARBS 305 Arabic Literature and Gender, ARBS 306 Arabic Literature and Film, ARBS 307 The Writer and the State, ARBS 308 Colloquial and Folk Literature, ARBS 309 Selected Themes and Topics in Arabic Literature, ARBS 310 Selected Themes and Topics in Arabic Literature in Translation, ARBS 311 Classical Arabic Poetry, ARBS 312 Classical Arabic Prose, ARBS 313 Modern Arabic Poetry, ARBS 314 The Arabic Novel, ARBS 315 Arabic Drama, ARBS 316 The Arabic Short Story, ARBS 401 Senior Seminar in Arabic Texts, ARBS 402 Senior Seminar in Arabic Literature in Translation, ARBS 403 Arabic Literary Criticism.

Classical/Medieval Islamic History Minor

Requirements (15 credits): 5 courses from the following, depending on the student's area of interest: ARBS 320 Introduction to Sufism, ARBS 321 Social and Cultural History of the Middle East, 600-1800 A.D., ARBS 322 Land, Trade and Power: a History of Economic Relations in the Middle East, 600-1800 A.D., ARBS 323 Marriage and the Family in the Medieval and Early Modern Middle East, ARBS 324 Non-Muslim Communities in the Muslim World, ARBS 336 Studies in Ibn Khaldun, ARBS 343 Arab-Islamic Civilization in the Classical Age, 600-945 A.D., ARBS 344 Arab-Islamic Civilization in the Middle Period, 945-1380 A.D., ARBS 345 Islamic Civilization, 1380-1800 A.D., ARBS 353 Muslim Political Thought, ARBS 440 Arabic Historical Literature, ARBS 451 Islamic Institutions, ARBS 460 Selected Topics in Middle East History, 600-1800 A.D.

Islamic Art and Architecture Minor

This minor gives a greater appreciation of the cultural heritage of the Arab-Islamic world to interested students.

Requirements (15 credits): ARBS 206 Art and Architecture of the City of Cairo, ARBS 270 and 271 Introduction to Islamic Art and Architecture; and **two** of the following: ARBS 370 Pre-Islamic Influences on Islamic Art and Architecture, ARBS 371 or 372 Islamic Art and Architecture in Egypt and Syria, ARBS 465 or 466 Islamic Art and Architecture in Turkey, Persia, and Central Asia.

Islamic Studies Minor

The minor is designed for students, particularly those coming from abroad, who wish to gain a deeper knowledge and appreciation of Islam as a culture.

Requirements (15 credits): ARBS 404 Sira, Hadith and Tafsir; ARBS 435 Studies in the Qur'an; ARBS 451 Islamic Institutions; and **two** of the following: ARBS/HIST 336 Studies in Ibn Khaldun, ARBS/POLS 353 Muslim Political Thought, ARBS/PHIL Islamic Philosophy, ARBS/HIST 454 Modern Movements in Islam, ARBS/HIST 463 Selected topic in the History of Islamic Thought and Institutions.

Arabic Studies Courses (ARBS)

201 Introduction to Classical Arabic Literature (3cr.)

Offered in fall and spring.

An introduction to the classical Arabic literary tradition through readings of major texts. Prerequisites: Thanawiya 'Amma or placement examination. Taught in Arabic.

202 Introduction to Modern Arabic Literature (3 cr.)

Offered in fall and spring.

An introduction to the literature of the nineteenth and twentieth centuries through readings of major texts. Prerequisites: Thanawiya 'Amma or placement examination. Taught in Arabic.

203 Classical Arabic Literature in Translation (3 cr.)

Offered in fall and spring.

An introduction to the classical Arabic literary tradition through readings of major texts. Taught in English, with assigned texts in English translation.

204 Modern Arabic Literature in Translation (3 cr.)

Offered in fall and spring.

An introduction to the literature of the nineteenth and twentieth centuries through readings of major texts. Taught in English, with assigned texts in English translation.

206 Art and Architecture of the City of Cairo (3 cr.)

Offered in the fall and spring.

The artistic heritage of Fustat - Cairo from 641 A.D. to the present, with emphasis on its urban and architectural development. Classwork is supplemented by six to eight field trips on Saturday mornings.

246 Survey of Arab History (3 cr.)

Same as HIST 246. Offered in fall and spring.

This course presents the history of the Arab-speaking Middle East from pre-Islamic times to the modern era, with emphasis on some of the principal political, economic, social, religious, and cultural developments and their relevance to the contemporary Middle East. The course introduces students to historiographical methodology and different interpretive approaches. It attempts to foster a critical attitude toward sources and provides a context in which students can apply skills and concepts acquired in other required-core courses.

270-271 Introduction to Islamic Art and Architecture (3 cr. per semester)

Prerequisite for ARBS 271: ARBS 270, or ARBS 206. Both parts offered each semester. Important works in architecture and decorative arts from the seventh century AD to the Ottoman period; artistic achievements of Muslim Spain, North Africa, Syria, Mesopotamia, Iran, and Turkey. ARBS 270 up to 1200 AD onwards.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

301 The Classical Tradition I (3 cr.)

Offered in fall.

Literary texts covering the pre-Islamic to the Umayyad period. Taught in Arabic.

302 The Classical Tradition II (3 cr.)

Offered in spring.

Literary texts covering the Abbasid period to the eighteenth century. Taught in Arabic.

303 Constructions of Modernity I (3 cr.)

Offered in the fall.

Literature of the nineteenth and early twentieth centuries. Taught in Arabic.

304 Constructions of Modernity II (3 cr.)

Offered in the spring.

Study of twentieth century literary texts. Taught in Arabic.

305 Arabic Literature and Gender (3 cr.)

Offered in fall.

Investigates the construction of gender, both masculine and feminine, through readings in a variety of Arabic discourses. Taught in Arabic.

306 Arabic Literature and Film (3 cr.)

Offered in fall.

Looks at the intersection between literature and film as two modes of representation. Readings of Arabic literary texts, and in class screenings of films. Taught in Arabic.

307 The Writer and the State (3 cr.)

Offered in spring.

Explores the nature of the relationship between writers and authority, in allegiance or in opposition. Taught in Arabic.

308 Colloquial and Folk Literature (3 cr.)

Offered in spring.

Arabic colloquial and folk literature through the study of various genres. Taught in Arabic.

309 Selected Themes and Topics in Arabic Literature (3 cr.)

Offered occasionally.

Focuses on one theme in the classical and/or modern period such as love, satire and humor, regional literature, wisdom literature, Sufi literature, tradition and modernity, self and other, alienation and exile. See class schedule for specific theme or topic offered. May be repeated once for credit if content changes. Taught in Arabic.

310 Selected Themes and Topics in Arabic Literature in Translation (3 cr.)

Offered in fall and spring.

Focuses on one theme or topic in the classical and/or modern period such as political poetry, village and city, literature of place, Arab women writing. See class schedule for specific theme or topic offered. May be repeated once for credit if content changes. Taught in English, with assigned texts in English translation.

311 Classical Arabic Poetry (3 cr.)

Offered in alternate years.

Study of the development of classical Arabic poetry, covering the most important poets and poetic genres. Taught in Arabic.

312 Classical Arabic Prose (3 cr.)

Offered in alternate years.

Study of the development of classical Arabic prose and fiction, covering the most important writers and genres. Taught in Arabic.

313 Modern Arabic Poetry (3 cr.)

Offered in alternate years.

Study of modern movements in Arabic poetry. In-depth reading of major modern Arab poets. Taught in Arabic.

314 The Arabic Novel (3 cr.)

Offered in alternate years.

Study of different trends in the Arabic novel. In-depth reading of major modern Arab novelists. Taught in Arabic.

315 Arabic Drama (3 cr.)

Offered in alternate years. Study of Arabic drama through readings of major texts. Taught in Arabic.

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316 The Arabic Short Story (3 cr.)

Offered in alternate years.

Study of the short story as a genre in modern Arabic literature. In-depth reading of major short story writers. Taught in Arabic.

317 Special Studies in Arabic Texts (3 cr.)

Special readings in Arabic texts for those majors in Arabic Studies who are attending a course taught in English and who must read the assigned texts in Arabic to fulfil the requirements of their specialization. May be repeated once for credit if content changes.

320 Introduction to Sufism (3 cr.)

Offered in alternate years.

An introduction to mysticism in its Islamic context: a survey of the historical development of *tasawwuf*, the main trends in Sufi thought and practice, the role played by Sufis and Sufi brotherhoods in society and the Sufi contributions to Middle Eastern culture.

321 Social and Cultural History of the Middle East, 600-1800 A.D. (3 cr.)

Offered in alternate years.

Examination of major trends in social and cultural trends, movements, and institutions in the medieval and early modern Middle East. Includes the interpretation of cultural identity, the transmission of knowledge and culture, the construction of social status, and the integration or marginalization of specific social groups in family, social and state structures.

322 Land, Trade and Power: a History of Economic Relations in the Middle East, 600-1800 A.D. (3 cr.)

Offered in alternate years.

Examination of the major economic structures in the Middle East prior to the modern period: the consideration of land as a major resource, structures for its management and the competition to control it. The organization of trade and commerce, including the role of merchant communities and their place in society.

323 Marriage and the Family in the Medieval and Early Modern Middle East (3 cr.)

Offered in alternate years.

Examination of the perspectives and approaches which define marriage, the family, the household and private life in the Middle East; the study of these questions in relation to larger issues such as Islamic law and changing social, political and economic structures, and how these are interlinked with family structure, sexual segregation, definitions of private and public. Sources include travellers' accounts, legal works, architecture, deeds of pious foundations, and court records.

324 Non-Muslim Communities in the Muslim World (3 cr.)

Offered in alternate years.

Examination of the history of non-Muslim communities in the Muslim world, with

special focus on Egypt. Study of legal status, issues of identity and assimilation, contribution to the cultural life and social life of societies, participation in Mediterranean trade, and interaction and relations between non-Muslim communities and Muslims as well as the non-Muslim world.

325 On The Fringes of Society: Marginals in History (3 cr.)

Offered in fall.

The course will examine the place of marginals both in the sense of those people who are socially marginalized like beggars, people suffering from poverty, insane persons, or people who for any reason are not socially integrated. It may include those who do not have a place in history because they do not make use of the written word, such as peasants or rural communities.

335 An Introduction to Islam (3 cr.)

Offered in spring.

A survey of Islam and its history from the formative period to its manifestations in modern times, with a discussion of sectarian movements such as Kharijism, Shi'ism and Sunnism, various schools of thought in law, theology, philosophy and mysticism, as well as modern interpretations of Islam, especially with regard to political, social and gender issues.

336 Studies in Ibn Khaldun (3 cr.)

Same as HIST 336. Offered in alternate years.

Examination of Ibn Khaldun's work, his place in Arab Muslim thought, and his value as a critic of Muslim culture and institutions.

343 Arab-Islamic Civilization in the Classical Age, 600-945 A.D. (3 cr.)

Same as HIST 343. Offered in fall.

The rise of Islam and Arab expansion, the classical period of Islamic civilization during its first centuries to the period of Abbasid political disintegration.

344 Arab-Islamic Civilization in the Middle Period, 945-1380 A.D. (3 cr.)

Same as HIST 344. Offered in alternate years.

The later Abbasid caliphate, the rise of Shi'ism and the Fatimids, Sunni consolidation under the Seljuks and Ayyubids, external threats to *dar al-Islam*; the rise of the Mamluks.

345 Islamic Civilization, 1380-1800 A.D. (3 cr.)

Same as HIST 345. Offered in fall.

The decline of the Mamluks; the Timurids in Persia; the age of gunpowder: the Safavid, Ottoman, and Moghul empires and their decline.

353 Muslim Political Thought (3 cr.)

Same as POLS 353. Prerequisite: ARBS 246 or consent of instructor. Offered in fall and spring.

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The development of political theory in Muslim civilization. Analysis of leading schools and individuals. Source readings in Arabic or in translation.

354 Islamic Philosophy (3cr.)

Same as PHIL 354. Prerequisite: ARBS 246 or ARBS 343 or consent of instructor. Offered occasionally.

A survey of the rational and spiritual dimension of the Arab-Islamic civilization as shown in the thought and ideas of major theologians, philosophers, and mystics.

355 State and Society in the Middle East, 1699-1914 (3 cr.)

Same as HIST 355. Offered once a year.

The decay and transformation of premodern institutions and the growth of Western influence in the Middle East. Changes in the state and class structures, economic growth and new religious and political movements.

356 After Empire: Nationalism and Social Change in the Middle East, 1914-Present (3 cr.)

Same as HIST 356. Offered in fall and spring.

Nationalism and colonialism; independence movements; and social, political, and intellectual change in the twentieth century.

370 Pre-Islamic Influences on Islamic Art and Architecture (3 cr.)

Prerequisite: ARBS 271. Offered in alternate years.

Near Eastern art forms during 200-634 AD. Byzantium, the Mediterranean, Arabia, Syria, and the Copts, Persia and Central Asia, their legacy.

371-372 Islamic Architecture in Egypt and Syria (3 cr. per semester)

Prerequisite: ARBS 271. 371 offered in fall, 372 offered in spring.

Development of architecture and decorative styles in Egypt and Syria from the Arab to the Ottoman conquests, including, in the second semester, the Mamluk period; field trips to Cairo monuments.

400 Independent Study (1-3 cr.)

In exceptional circumstances, some senior majors may, with department approval, arrange to study beyond the regular course offerings. Open only to senior majors with a minimum of B average. May be repeated for credit if content changes.

401 Senior Seminar in Arabic Texts (3 cr.)

Offered in fall.

A selected theme or topic in classical or modern Arabic texts such as regional literatures of the Arab World, cross-cultural encounters in the Mediterranean, Arabic cultural criticism, avant-garde movements in Arabic literature. May be repeated once for credit if content changes. Taught in Arabic.

402 Senior Seminar in Arabic Literature in Translation (3 cr.)

Offered in spring.

A selected theme or topic in Arabic literature, classical or modern, such as francophone and anglophone Arab writers, Andalusian literature, writers and the nation. May be repeated once for credit if content changes. Taught in English, with assigned texts in English translation.

403 Arabic Literary Criticism (3 cr.)

Offered in alternate years.

Arabic critical theory from the classical to the modern period. Taught in Arabic.

404 Sira, Hadith, and Tafsir (3 cr.)

Offered in fall.

The growth of the biographical literature on the Prophet and its relation to the literature of Hadith and Qur'anic exegesis. Taught in Arabic unless otherwise stated.

413-414 Arabic Syntax (Nahw) (3 cr. per semester)

Same as ALNG 413-414. 413 offered in fall, 414 offered in spring.

Examination of the basic features of Arabic syntax (nahw) with particular reference to the treatment of the subject by Arab grammarians. Reference is also made to the system of terminology adopted for the subject by Western scholars.

415 Arabic Morphology (Sarf) and Prosody ('Arud) (3 cr.)

Same as ALNG 415. Offered occasionally.

Examination of the basic features of Arabic morphology (sarf) and prosody ('arud), with particular reference to the treatment of the subjects by Arab grammarians. Reference is also made to the system of terminology adopted for the subject by Western scholars.

417 Special Studies in Arabic Texts (3 cr.)

Special readings in Arabic texts for those majors in Arabic Studies who are attending a course taught in English and who must read the assigned texts in Arabic to fulfil the requirements of their specialization. May be repeated once for credit if content changes.

425 Linguistics of Arabic (3 cr.)

Same as ALNG 425. Offered in fall.

Development of the linguistic structure of Arabic and the Arabic of the early Islamic era as described by the early Arab phoneticians.

426 The Phonetics of Arabic (3 cr.)

Same as ALNG 426. Offered in spring.

Phonetics of classical Arabic as it is spoken in Egypt; reference to the phonetics of both Egyptian colloquial Arabic and the Arabic of the early Islamic era as described by the early Arab phoneticians.

435 Studies in the Qur'an (3 cr.)

Prerequisite: consent of instructor. Offered in fall.

The greatest work in Arabic and its influence on Arabic literature and Islamic institutions, with emphasis on methods of interpretation and their development.

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439 Islamic Law (3 cr.)

Prerequisite: consent of instructor. Offered in fall and spring.

A survey of the origins of Jurisprudence in Islam and its development up to the founding of the four schools. The course covers the main sources of fiqh, Qur'an and Sunna, together with ijma' and qiyas, and the study of the growth of the Maliki, Hanafi, Shafi'i and Hanbali schools.

440 Arabic Historical Literature (3 cr.)

Offered in alternate years.

Study of the inception and development of the idea of history in Arabic literature. Examines issues in the transmission of information, historical memory, and the role of historical writing in mediating social, political and religious views.

445 Selected Topics in Coptic Studies (3 cr.)

Same as ANTH, EGPT, HIST, SOC 445. Offered in fall.

This course allows instructors to offer a topic in Coptic Studies. The topic will be chosen from year to year in coordination with the departments concerned and the dean of the School of HUSS, and according to the individual interests and areas of expertise of the instructors. Topics chosen may include various aspects of Coptic art and history, monasticism, folklore, or other subjects. The course may be taken more than once if the topic changes. Students in these majors may petition preferably before registration to have the course included in their major requirements.

451 Islamic Institutions (3 cr.)

Prerequisite: ARBS 246 or 343 or consent of instructor. Offered in fall.

Examination of the principal social, legal, and political institutions in medieval Islam, especially those subsumed under shari'a.

454 Modern Movements in Islam (3 cr.)

Same as HIST 454. Offered in alternate years.

Changes in Muslim thought about Islamic institutions. New groupings in the nineteenth and twentieth centuries.

460 Selected Topics in Middle Eastern History, 600-1800 AD (3 cr.)

Same as HIST 460. May be repeated for credit when content changes. Prerequisite: appropriate course(s) from ARBS 343-345 series or consent of instructor. Offered in fall and spring.

462 Selected Topics in the History of the Modern Middle East (3 cr.)

Same as HIST 462. May be repeated for credit when content changes. Prerequisite: HIST/ARBS 355 or HIST/ARBS 356, whichever is appropriate or consent of instructor. Offered occasionally.

463 Selected Topics in the History of Islamic Thought and Institutions (3cr.)

Same as HIST 463. Prerequisite: consent of instructor. Offered in spring. May be repeated for credit when content changes.

464 Islamic Art and Architecture in India and Pakistan (3 cr.)

Prerequisite: ARBS 465 and 466 or consent of instructor. Offered occasionally.

Religious and secular architecture and decoration of Islam in the Indian subcontinent; discussion of the formative impulses from pre-Islamic traditions of India and Pakistan and Islamic influences from Persia, Afghanistan and Central Asia.

465-466 Islamic Architecture in Turkey, Persia and Central Asia (3 cr.)

Prerequisite: ARBS 270. Offered in alternate years.

First semester: Ghaznavids, Seljuks, and Mongols. Second semester: Timurids, Safavids, and Ottomans.

467 Islamic Architecture in Spain and North Africa (3 cr.)

Prerequisite: ARBS 270. Offered occasionally.

Religious and secular architecture and decoration of Islamic Spain and North Africa; discussion of formative impulses from Byzantium and Umayyad Syria.

468 Painting in Islam (3 cr.)

Prerequisite: ARBS 271. Offered in alternate years.

Pictorial styles and techniques from the Umayyads to the Ottomans.

469 Islamic Pottery (3 cr.)

Prerequisite: ARBS 270 or 271. Offered in alternate years.

Styles and dating of Muslim ceramics, work with sherds and pottery.

477-478 Islamic Decorative Arts (3 cr. per semester)

Prerequisite: ARBS 271. Offered in alternate years.

Wood carving, ivory, metals, textiles, glass, and carpets of the Islamic world; ornamental elements in common; materials, objects and design.

Archaeological Chemistry

Minor - See Chemistry

Architectural Design

Minor - See Construction Engineering

ART

Department of Performing and Visual Arts
School of Humanities and Social Sciences

Associate Professor: M. Robinson
Assistant Professors: N. Shahrokh, A. Shafer (Unit Head)

The Department of Performing and Visual Arts offers an undergraduate bachelor's degree as well as a minor in Art. The curriculum balances theoretical and practical experience from studio and art history courses. All courses within the Art unit include components which encourage writing proficiency. The unit embraces the philosophy of the broad-based liberal arts education.

Bachelor of Arts

The curriculum for the B.A. in Art provides a generalist approach within a liberal arts tradition and offers the possibility of a concentration of courses either in Studio Art or Art History. Integration of various artistic disciplines is promoted, including a solid component of the non-Western (especially the Arabic/Egyptian) contribution to the arts.

Studio Art courses develop a comprehensive foundation in two-dimensional studio art disciplines in conjunction with a strong theoretical component of Art History. Courses in Art History take advantage of the uniqueness of the AUC's geographical position in the world, drawing from influential movements in Western art as well as from the rich aesthetic heritage of the Middle East.

In order to ensure the excellence and commitment of art major candidates, all students will be required to submit a portfolio of their work and to have taken three introductory courses (ARTV 200, 201, and either 310, 211, or 212) before being allowed to declare the major.

Major Requirements:
A total of 120 credits are required for the bachelor's degree in Art:

Core Curriculum (34-46 credits)

Concentration Requirements (30 credits)

ARTV	200	Foundations of Design and Color, 3 cr.
	201	Drawing I, 3 cr.
	202	Painting I, 3 cr.
	211	World Art Survey I, 3 cr.
	212	World Art Survey II, 3 cr.

ARTV	310	Modern and Contemporary Art, 3 cr.
	311	Drawing II, 3 cr.
	312	Painting II, 3 cr.
	470	Advanced Seminar, 3 cr.
	370 or 314	Selected Topics in Art or Modern and Contemporary Architecture, 3 cr.

Collateral Requirements (15 credits)

EGPT	261	Art and Architecture of Ancient Egypt I, 3 cr.
	262	Art and Architecture of Ancient Egypt II, 3 cr.
ARBS	270-271	Intro to Islamic Art and Architecture, 6 cr.
PHIL	310	Philosophy and Art, 3 cr.

Four additional collateral courses to be chosen from among the following (12 credits):

ARTV	203	Introduction to Sculpture, 3 cr.
	230	The Art of Photography, 3 cr.
	370	Selected Topics in Art, 3 cr.
		(when repeated with new content or in addition to ARTV 314).
JRMCT	402	Independent Study, 3 cr.
	230	Intro to Photography, 3 cr.
	305	Intro to Graphic Communications, 3 cr.
	315	Public Relations and Advertising, 3 cr.
	330	Advanced Photography, 3 cr.
	405	Advanced Graphic Communications, 3 cr.
THTR	425	Advanced Advertising, 3 cr.
	320	Design for the Theatre: Scenography, 3 cr.
	321	Design for the Theatre: Costume, 3 cr.
	322	Design for the Theatre: Stage Lighting, 3 cr.
FILM	324	Design for the Theatre, 3 cr.
	220	Intro to Film, 3 cr.
	330	Film Theory and Criticism, 3 cr.
	350	Film Production, 3 cr.
FILM/ANTH	341	Anthropology and Film, 3 cr.
ARBS	206	Art and Architecture of the City of Cairo, 3 cr.
	370	Pre-Islamic Influences on the Art and Architecture of Cairo, 3 cr.
	468	Painting in Islam, 3 cr.
	469	Islamic Pottery, 3 cr.
	477-478	Islamic Minor Arts, 6 cr.
EGPT	202	Ancient Egypt, 3 cr.
	204	Archaeology : Methods and Theories, 3 cr.
ANTH	202	Cultural Anthropology, 3 cr.
HIST	402	Selected Topics in European History, Power and Art (or other when art is the central focus of the course), 3 cr.

Other Selected Topics courses may apply when art is the central focus of the course.

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Electives (17-29 credits)

All elective courses must be selected in consultation with an art advisor. Non-collateral electives will preferably constitute a minor.

Minor

The minor in Art provides a general introduction to studio practices of design, drawing and painting as well as their historical models.

Requirements (15 Credits): Art minors are required to take ARTV 200, ARTV 201, ARTV 202 and ARTV 310, in addition to a fifth course which must be chosen from the following: ARTV 211, ARTV 212, ARTV 311, ARTV 312, ARTV 402, ARTV 470, ARTV 370.

Art Courses (ARTV)

200 Foundations of Design and Color (3 cr.)

Offered in fall and spring.

An introduction to fundamental concepts of visual communication. Students explore the elements of two-dimensional design and color theory in a sequence of interactive experiments, culminating in a creative linked project to a visual theme.

201 Drawing I (3 cr.)

Prerequisite: ARTV 200 or "What is Art?", ARTV 299 . Offered in fall and spring.

A foundation for developing and attempting to record a visual relationship with oneself and one's environment in a variety of drawing media. May be repeated for a total of 6 hrs with a different instructor, consent of instructor and space permitting.

202 Painting I (3 cr.)

Prerequisite: ARTV 201. Offered in fall and spring.

An introduction to both the technical and aesthetic aspects of painting in acrylic and/or oil. Formal concepts of composition, pictorial space, color interaction, etc. are introduced and applied to subjects drawn from life including still-life landscape and the figure.

203 Introduction to Sculpture (3 cr.)

Prerequisite: ARTV 200 . Offered in fall or spring.

An introduction to the fundamental elements of making and understanding sculpture, within historical and contemporary contexts. Concepts such as three-dimensional form, mass, volume, and drawing are explored through a hands-on, project-based approach.

211 World Art Survey I (3 cr.)

Offered in fall and spring.

The chronological development of the visual arts in all their major forms. Both Western and non-Western art, from prehistoric beginnings to late Gothic.

212 World Art Survey II (3 cr.)

Offered in fall and spring.

A continuation of the study of the chronological development of art, from early Renaissance onwards.

222 Architecture: Art or Engineering (3 cr.)

Same as CENG 222.

Architecture, the art and science of designing buildings, is utilized to contrast the "Arts" and "Engineering" approaches to design. The course addresses issues related to form and space generation, function and interior environment, as well as exterior and site considerations. The aspects of materials and construction are considered. Famous buildings and architectural styles will be critically analyzed from the perspectives of both the artist and the engineer.

230 The Art of Photography (3 cr.)

Prerequisite: ARTV 200.

An introduction to basic photography combining the technical aspects of processing and developing film with an understanding of lighting and composition and informed by the history of photography.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

310 Modern and Contemporary Art (3 cr.)

Offered once each year.

A survey of the development of style and content in late nineteenth and twentieth century painting, drawing and sculpture. This course examines the complex interrelationships among rapidly changing social, political, intellectual and technological currents, and the formal, conceptual and expressive concerns of artists.

311 Drawing II (3 cr.)

Prerequisite: ARTV 201. Offered once each year.

A continuation of ARTV 201 in which students are encouraged to explore a more personal approach to image making. This course emphasizes experimentation with a wide variety of techniques and culminates in a project of related drawings.

312 Painting II (3 cr.)

Prerequisite: ARTV 202. Offered once each year.

A continuation of ARTV 202 in which pictorial concepts are reinforced and expanded upon. The interrelation of content and form is stressed as an important aspect of self-expression.

314 Modern and Contemporary Architecture (3 cr.)

Offered occasionally.

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The development of modern and contemporary architecture in the world, as reflected in the key movements and the work of their major masters, with a special emphasis on Egypt. Recent architecture is examined in its relationship to the past and the course focuses on the role of the architect, his work and his challenges in a contemporary environment.

370 Selected Topics in Art (3 cr.)

Offered occasionally. Can be substitute for ARTV 314 for the Art major.

In-depth examination of specific topics in art determined by the special interests and expertise of the faculty. May be repeated for credit when content is different.

402 Independent Study (1-3 cr.)

Prerequisite: ARTV 311 or ARTV 312. May be repeated for credit more than once if content changes. Open to students with a minimum B average. Offered in fall and spring. In exceptional circumstances, advanced students may arrange, with departmental approval, to study beyond the regular course offerings.

470 Advanced Seminar (3 cr.)

Prerequisite: Consent of the instructor. Offered yearly, spring semester.

A culmination of Art Major studies which requires the production of a body of work for exhibition in the Advanced Students Art Exhibition. Gives experience planning, preparing, and promoting a public art exhibition. Open to advanced students, preferably in their final semester.



AUC's art program concentrates primarily on two-dimensional studio art.

BIOLOGY

Department of Biology
School of Sciences and Engineering

Professor Emeritus: A. Main

Professor: S. Zada (Chair)

Associate Professor: J. Miller

Assistant Professors: T. Quayle, M. Hassan, H. Mahmoud, R. Siam

Biology is the science that deals with the origin, history, characteristics, and habits of life. The approach in biology education is dynamic in an attempt to keep the basic programs current with the advances being made in the field. At AUC, as at many colleges and universities, there is a growing tendency to merge what had diverged into widely segregated fields: botany and zoology, classical and modern molecular approach, field and laboratory studies. Today, with recent advances in the fields of biomedicine, molecular biology, and genetics and the growing political interests in the environment and biodiversity, the discipline is growing with increasing opportunities in the job market (and for research grants) for well-trained biologists.

Bachelor of Science

The undergraduate program at AUC offers interested students a liberal education in biological sciences leading to a Bachelor of Science degree giving graduates the broad background necessary in today's job market or preparing them for graduate and professional schools.

Students with a Bsc degree in biology are securing positions in the growing fields in industry and in academia. The recent advances in biology have created important new industries in genetic engineering, biomedicine, biotechnology, and pharmacology. Students with ambitions beyond the bachelor level are entering graduate schools (in classical and molecular biology) and professional schools (medicine, dentistry, veterinary medicine).

Students wishing to receive a bachelor of science degree in biology will be required to take a total of 132 credits:

Core Curriculum (30-42 credits)

The course selected for the natural science elective may also satisfy a collateral requirement.

Concentration Requirements (46 credits)

BIOL	104	The Unity of Life, 4 cr.
	105	The Diversity of Life, 4 cr.

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BIOL	204	The Principles of Systematics, 4 cr.
	211	Cell Biology, 4 cr.
	214	General Botany, 4 cr.
	215	Biophysics, 4 cr.
	221	Genetics, 4 cr.
	240	Ecology, 4 cr.
	312	Comparative Anatomy, 4 cr.
	315	Biochemistry, 3 cr.
	340	Quantitative Biology, 4 cr.
	495	Senior Research Thesis, 2 cr.
	496	Seminar, 1 cr.

Sixteen additional credits from 300- and 400- level courses excluding courses listed above.

Collateral Requirements (25 credits)

CHEM	105/115L	General Chemistry I, 4 cr.
	106/116L	General Chemistry II, 4 cr.
	203/213L	Organic Chemistry I, 4 cr.
	306	Organic Chemistry II, 3 cr.
MATH	112	Elementary Statistics, 3 cr.
	131	Calculus and Analytic Geometry I, 3 cr.
PHYS	111/123L	General Physics I, 4 cr.

General electives (3-15 credits)

Minor

The program also offers a minor in Biology to supplement the education of students in related disciplines including but not limited to biometry, bioinformatics, biochemistry, biophysics, psychology, and anthropology.

Twenty credits are required for a minor in Biology: BIOL 104 (The Unity of Life), 105 (The Diversity of Life), and three additional 4-credit 200, 300, or 400 level BIOL courses.

Minor in Environmental Science

This is an interdisciplinary minor coordinated by the Departments of Biology and Chemistry. For details, refer to the specific entry "Environmental Science".

Biology Courses (BIOL)

102 Essentials of Environmental Biology (3 cr.)

Prerequisite: non-science students. Offered in fall.

This course examines basic biology principles as they relate to environmental

problems and their solutions. Ecological problems and their underlying current environmental dilemmas will be considered. Depletion and pollution of natural resources and their biological consequences also be considered.

103 Introductory Biology (3 cr. + 1 cr. lab)

Prerequisite: non-science majors only. Offered in fall, spring and summer.

This is a basic biology course for non-science majors. It covers the general aspects of biology including life manifestations and needs, the cell as a unit of life, its structure and function, dynamics of energy utilization and assembly into tissues and organs, physiological processes, and ecological relations. Students taking BIOL 103 may not take BIOL 104

104 The Unity of Life (3 cr. + 1 cr. lab)

Offered in fall, spring and summer.

This course is designed for science majors, but can be taken by anyone interested in studying biology in more depth than Biology 103. It may not be taken by students who have taken BIOL 103 for credit. Introduction to principles of biology, organic and inorganic molecules, membranes and internal structures of cells, photosynthesis, respiration, DNA structure and function, genetic engineering, and the different tissues and organ systems. Laboratories introduce the student to basic principles of plant and animal structure and function and builds on the principles of inheritance to the structure and function of tissues and organ systems.

105 Diversity of Life (3 cr. + 1 cr. lab)

Offered in spring.

This course is designed for science majors, but can be taken by anyone interested in studying biology in more depth than Biology 103. Based on the diversity of life: viruses, bacteria, protists, fungi, plants and animals. It concentrates on development, structure, and function of plants and animals, population genetics, ecology and the environment, and animal behavior. Laboratories introduce students to systematics, evolution, population dynamics, and modeling of populations of organisms and ecosystems. Some field applications are examined.

130 Current Health Issues (4 cr.)

This course is open to all AUC students. It explores the public and personal health infrastructure with a focus on Egypt. The course has an optional service-learning component in which students become aware of their role in community health issues. Information will be present in the form of classroom discussions, debates, field trips, and videos.

199 Selected Topic for Core Curriculum (3 cr.)

Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

204 Principles of Systematics (3 cr. + 1 cr. lab)

Prerequisites: BIOL 105. Offered in fall.

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Principles of classification, identification, nomenclature, cladistics, and descriptions of protista, plants, and animals. The taxa of higher levels of selected organisms. Laboratory involves the comparative approach using both specimens and field observations of selected species of plants and animals. Field trips are required.

210 Evolution (3 cr.)

Offered in fall.

A study of the history and principles of organic evolution. The evidence for evolution, mechanisms of evolution and population genetics are emphasized.

211 Cell Biology (3 cr. + 1 cr. lab)

Prerequisites: BIOL 104 and CHEM 203 or corequisite.

This course is an evolutionary survey of cell specialization of microbes, fungi, plants, and animals. It includes the correlation of microanatomical structures with cellular function and differentiation, teratology, and histology. Laboratories include the identification of basic cell structures and inclusions, tissues and organs, and microscopic preparations.

214 General Botany (3 cr. + 1 cr. lab)

Prerequisites: BIOL 104 and 105. Offered in spring.

Structure and function of nonvascular and vascular plants. Includes in-depth studies of photosynthesis, metabolism, reproduction, development, physiology, internal transport, evolution, and ecology of plants. Laboratory includes examination of herbaria specimens, growth-chamber experimentation and desert plant ecology and adaptation.

215 Biophysics (4 cr.)

Prerequisites: PHYS 111/123L.

Principles and concepts in the physical analysis of life processes. Fundamental physical and physicochemical treatment of various kinetic processes underlying the normal function of biological systems. Includes mechanics, hydrodynamics, electricity, optics and nuclear physics.

221 Genetics (3 cr. + 1 cr. lab)

Prerequisites: BIOL 104.

Survey of modern genetics: Mendelian transmission, chromosomes and gene organization, properties of nucleic acids, gene expression, gene regulation, and population genetics. The three-hour laboratory consists of exercises in genetic problem solving, computer simulation and breeding and crossing of fruit flies.

240 Ecology (3 cr. + 1 cr lab)

Prerequisite: BIOL 105.

A study of the composition, structure and function of plant and animal communities and the environmental factors regulating their growth and succession. An investigative laboratory emphasizing data collection, analysis and interpretation is included. Field trips are an integral part of this course.

301 Animal Physiology (3 cr. + 1 cr. lab)

Prerequisite: BIOL 211.

A comparative approach to the nutrient procurement, temperature, osmotic and ionic regulation, regulation of fluids, respiratory, circulatory, and digestive systems, reproduction, hormonal and nervous control, behavior, and biological rhythms of animals. Laboratory emphasizes the physiology of invertebrates and vertebrates.

302 Environmental Biology for Engineers (2 cr. + 1 cr. lab)

Prerequisite: Junior or senior standing.

This course covers aspects of soil, water, food, and mineral resources management, waste disposal, energy alternatives, population ecology, and environmental ethics with special emphasis on problems encountered by engineers. Laboratory includes field studies of ecosystems, environmental monitoring instrumentation, solar energy techniques, electronic population modeling and techniques used to deal with human consumption of natural resources.

303 Developmental Biology (3 cr. + 1 cr. lab)

Prerequisite: BIOL 211.

Studies of the embryogenesis of plants and animals. Emphasizes gamete development, fertilization, stages of morphological development, organ system development, and teratology in selected species. Laboratory includes microscopic examination of various stages of development of plant, amphibian, fish, reptile, avian and mammalian species.

304 Taxonomy (3 cr. + 1 cr. lab)

Prerequisite: BIOL 204.

Principles and methods of taxonomy -classification, systematics, phylogeny, nomenclature, phenetics and cladistics -using a selected group of organisms as a paradigm. Laboratory emphasizes the analysis, interpretation and presentation of taxonomic data.

305 Environmental Biology (3 cr. + 1 cr. lab)

Prerequisites: BIOL 240 or instructor's consent.

Examination of degradation and pollution of natural environments. Aspects of soil, water, food, and mineral resources management, waste disposal, energy alternatives, population ecology, and environmental ethics. Laboratory to include field studies of ecosystems, environmental monitoring instrumentation, solar energy techniques, electronic population modeling, techniques used to deal with human consumption of natural resources.

306 Environmental Biology of the Red Sea (3 cr. + 1 cr. lab)

Prerequisites: students must be good swimmers and consent of the instructor.

This course is designed to be an interdisciplinary course for students with an interest in coastal and marine environmental issues. Topics covered include marine biology, ecology, geology, paleontology, climatology, and oceanography. Using the Red Sea as a model, students will receive extensive field experience in evaluating the impact of natural phenomena and human activities on coastal and marine environmental planning, management, and monitoring, as well as in the preparation of environmental impact assessments. Laboratories and field trips to the Red Sea are essential to the course.

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307 Microbiology (3 cr. + 1 cr. lab)

Prerequisites: BIOL 211.

Fundamental concepts in morphology, physiology, genetics, immunology, ecology and pathogenic microbiology. Applications of microbiology to medicine, the food industry and biotechnology are taught. Laboratory emphasizes fundamental techniques in culturing, studying and identifying microorganisms.

312 Comparative Anatomy (3 cr. + 1 cr. lab)

Prerequisites: BIOL 104 and 105.

Comparative anatomy of chordates, their evolution, and phylogenetic relationships. Three-hour laboratory includes dissection of chordates.

313 Invertebrate Zoology (3 cr. + 1 cr. lab)

Prerequisite: BIOL 105.

Anatomy, behavior, systematics, and phylogeny of invertebrates are included in the lectures. Three hour laboratory emphasizes morphology and anatomy.

315 Biochemistry (3 cr.)

Same as CHEM 315. Prerequisite: CHEM 306.

The living cell, structure of biomolecules and their relationship to biological functions; biochemical energetics; metabolism of major cellular components and their relationship to clinical conditions. Three class periods or two class periods and one three hour lab period.

320 Animal Behavior (3 cr. + 1 cr. lab)

Prerequisite: BIOL 221.

Study of ethology with emphasis on its development, control and function. Laboratory includes observations and descriptions, qualification techniques and experimentation.

340 Quantitative Biology (3 cr. + 1 cr. lab)

Prerequisites: BIOL 240 and MATH 112.

Application of mathematical and statistical techniques to analyze and interpret data relating to biological inquiries. Extensive use of appropriate computer technology will be applied in recording, cataloguing, analyzing, simulating and reporting data.

345 GIS For Biologists (4 cr.)

Prerequisite: Junior or Senior standing.

Geographic Information Systems (GIS) for Biologists is designed to introduce the student to the use and application of computer based mapping and analysis technology to ecological data. The application of GIS technology requires program operation skills, computerization of data and relevant biological information. The course is designed to provide "hands-on" skill development in the use and application of GIS.

350 Selected Topics in Biotechnology (1-4 cr.)

Prerequisites: permission of the instructor. May be repeated for credit if the content changes.

A practical learning experience in methodology in the various fields of biology,

including, but not limited, to virology, bacteriology, parasitology, entomology/ acarology, epidemiology, epizootiology, molecular biology, biotechnology, or care of laboratory animals. The student gets hands-on training by interning in an active laboratory under the guidance of an experienced researcher. Under the guidance of a faculty member, the student undertakes readings or research on a specific topic in biology. The student should demonstrate achievements by presenting results, submitting a report, or passing an examination as determined by the supervisor. The number of credit hours will be determined by the number of hours worked.

399 Guided Studies in Environmental Biology (3 cr.)

Offered in fall and spring.

Under faculty guidance, students will carry out a project on an environmentally related topic. The students will present their results by submitting a common/ individual report or by passing an examination, as determined by the supervisor.

408 Selected Topics in Biology (1-4 cr.)

Prerequisite: consent of the instructor.

Topics in biology chosen according to the special interests of the student and faculty. May be repeated for credit more than once if the content changes.

410 Guided Studies in Biology (1-4 cr.)

Prerequisite: consent of the instructor.

Under the guidance of a faculty member and with the approval of the Chair, the student undertakes readings or research on a specific topic in biology. The student should demonstrate achievements by presenting results, submitting a report, or passing an examination as determined by the supervisor.

411 Molecular Biology of the Gene (3 cr. + 1 cr. lab)

Prerequisites: BIOL 221 and CHEM 203 or corequisite.

A comprehensive course in modern molecular genetics with emphasis on principles, processes, and methodology leading to the formulation of central concepts of molecular genetics. Includes gene regulation and structure, genome organization and molecular evolution.

412 Molecular Cell Biology (3 cr. + 1 cr. lab)

Prerequisites: BIOL 211 and CHEM 203 or corequisite.

A comprehensive course in modern molecular biology with emphasis on principles, process, and methodology leading to the formulation of central concepts of cell biology. Includes energy flow within cells, information flow, cancer and growth control.

415 Immunology (3 cr. + 1 cr. lab)

Prerequisites: BIOL 211 and CHEM 105.

The student is introduced to the function and structure of the immune system at the molecular, cellular, tissue, and organ system levels and the processes involved in the host defense against infection. Laboratories include practical experience with the anatomy and histology of the lymphoid tissues, cell isolation and identification and

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serological and cellular immune techniques.

420 Genomics and Bioinformatics (3 cr. + 1 cr. lab)

Prerequisites: BIOL 411.

This course offers an in depth coverage of the rapidly expanding fields of genomics and bioinformatics. Extending from the principles presented in Molecular Genetics (BIOL 411), specialized topics are investigated through use of a current textbook, journals and computer demonstrations and applications. Topics include: the organization and structure of genomes, subdividing the genome, assembling a physical map of the genome, sequencing methods and strategies, genome annotation and bioinformatics, comparative genomics, global expression profiling and applications of genome analysis and genomics.

440 Marine Ecology (3 cr. + 1 cr. lab)

Prerequisite: BIOL 240 and CHEM 105.

Examination of the ecology of marine ecosystems. Relationship of physical and chemical processes of marine systems to biological processes in both pelagic and benthic regions. Where possible, examples will be drawn from the Mediterranean and the Red seas. Includes an extended field trip to marine research institute for "hands-on" experience in marine biological research.

445 Desert Ecology (3 cr. + 1 cr. lab)

Prerequisite: BIOL 240.

Examination of the ecology of desert ecosystems with particular reference to Middle-Eastern deserts. Emphasis is placed on the strategies employed by desert-living organisms which allow them to survive and prosper under desert conditions. Field trips are an integral part of this course.

495 Senior Research Thesis (2 cr.)

Prerequisite: senior standing in biology. Offered in fall.

Participating students select a topic according to their field of interest and the availability of advisors and facilities. Students prepare a written report based upon sound literature, laboratory and/or field investigations and present their findings orally in BIOL 496 (Seminar in biology).

496 Seminar in Biology (1 cr.)

Prerequisites: BIOL 495. Offered in the spring.

Weekly one hour seminars in different areas of biology and biotechnology to be given by students, faculty and invited speakers from industry and other scientific communities.

Business Administration

Major and Minor - See Management

CHEMISTRY

Department of Chemistry
School of Sciences and Engineering

Professors Emeriti: A. Bishay, G. Habashy, F. Hassan

Professors: P. Askalani, D. Fleita, A. Kinawi, M. Nasrallah, J. Ragai (Chair)

Assistant Professors: H. Azzazy, A. Ramadan

The chemistry program covers the four main branches of chemistry, namely organic, inorganic, physical and analytical. In addition students may specialize in clinical analysis or industrial chemistry. In all cases theoretical and applied knowledge are both reinforced and supplemented by a diverse selection of experimental work, a necessary facet of chemistry.

Bachelor of Science

The objective of the B.S. chemistry major is to train students in both the theory and practice of the major branches of chemistry. Our broad chemistry training prepares students to work in such diverse field as research and development, teaching, quality control and industrial production. The specializations enhance the career marketability of chemistry graduates.

A student who intends to major in chemistry must complete Chemistry 105 and 115 with a minimum of a B average, or if declaring the major before the completion of these two courses, should have obtained a minimum of 80% in Thanawia Amma science or equivalent in other certificates.

A total of 131 credits is required for the bachelor's degree in chemistry:

Core Curriculum (30-42 credits)

The science requirements of the core curriculum electives are satisfied by the collateral requirements of the major.

Concentration Requirements (53 credits)

CHEM 105-106	General Chemistry I & II, 6 cr.
115-116L	General Chemistry Lab, 2 cr.
203	Organic Chemistry I, 3 cr.
206	Analytical Chemistry I, 2 cr.
216L	Volumetric and Gravimetric Analysis, 2 cr.
303	Thermodynamics, 3 cr.
304	Physical Chemistry I, 3 cr.
306	Organic Chemistry II, 3 cr.
309	Inorganic Chemistry I, 3 cr.
310	Organic Chemistry I Lab, 1 cr.

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CHEM 311	Analytical Chemistry II, 3 cr.
313L	Thermodynamics Lab, 1 cr.
314L	Physical Chemistry I Lab, 1 cr.
316L	Organic Chemistry II Lab, 2 cr.
318L	Inorganic Chemistry Lab, 1 cr.
400	Introductory Statistical Thermodynamics, 3 cr.
402	Physical Chemistry II, 3 cr.
406	Organic Chemistry III, 3 cr.
408	Inorganic Chemistry II, 3 cr.
412L	Physical Chemistry II Lab, 1 cr.
416L	Organic Chemistry Lab, 1 cr.
495	Senior Thesis, or substitute, 3 cr.

Specialization in Clinical Chemistry

CHEM 315	Biochemistry, 3 cr.
325	Clinical Chemistry I, 3 cr.
425	Clinical Chemistry II, 3 cr.

Specialization in Industrial Chemistry

CHEM 207	Industrial Chemistry I, 3 cr.
307	Industrial Chemistry II, 3 cr.
407	Industrial Chemistry III, 3 cr.

Collateral Requirements (29 credits)

CSCI 106	Fundamentals of Computer Science, 3 cr.
MATH 131-132	Calculus & Analytic Geometry I & II, 6 cr.
231	Calculus & Analytic Geometry III, 3 cr.
233	Differential Equations, 3 cr.
PHYS 111	Classical Mechanics, Sound and Heat, 3 cr.
112	Electricity and Magnetism, 3 cr.
123-124L	General Physics I & II Lab, 2 cr.
211	Introduction to Relativity and Nuclear Physics, 3 cr.
214	Waves, Optics and Atomic Physics, 3 cr.

Electives (7-19 credits)

Chemistry Minor

The minor in chemistry provides students with a workable knowledge of the basic principles of chemistry and some of their applications. Students may choose to concentrate on one of the following particular areas: Analytical, Inorganic, Organic or Physical Chemistry.

The minor in chemistry is comprised of (16-18 credits). CHEM. 105-106, CHEM. 115L-116L and 8-10 credits of higher level courses in chemistry to be chosen in consultation with a faculty member.

Archaeological Chemistry Minor

This minor in archaeological chemistry provides students with the necessary knowledge for the elucidation of some archaeological problems. The minor is of particular value to Arts or Egyptology students.

Students choosing this should have Thanawiya 'Amma Science or equivalent and will have to take CHEM 105 and 115L as part of their general science or core curriculum requirements.

Requirements for the minor are CHEM 106, 116L, 206, 216L, 311, 312, 410. Total credits in chemistry: 21.

Chemistry Courses (CHEM)

103 Chemistry and Society (3 cr.)

No credit for Thannawia Amma Math/Science students, or equivalent, or students majoring in any of the departments of the School of Sciences and Engineering. Offered in fall and spring.

Introduction to basic chemical principles within a contextual framework of major societal-technological issues such as air pollution, global warming, ozone depletion, acid rain, energy sources, and drinking water. Brief exposure to analytical, organic, and bio-chemistry is achieved through discussions on drug discovery, nutrition, polymers and genetic engineering.

104 Man and the Environment (3 cr.)

Not for credit for science, engineering and computer science majors. Offered in fall and spring.

Chemistry of the environment. Principles of ecosystem structures, energy flow and elements cycles. Natural resources and renewable energy. Renewable Energy. Pollution control and prevention: air pollution, global warming and the depletion of the ozone layer, water pollution, hazardous substances, solid and hazardous wastes, pests and pest control. Sustainability.

105 General Chemistry I (3 cr.)

Offered in fall and spring and sometimes in summer.

Chemical stoichiometry; atomic structure and periodicity; an overview of chemical bonding with a discussion of models and theories of covalent bonding; introduction to structure and chemistry of organic compounds; elementary nuclear chemistry.

106 General Chemistry II (3 cr.)

Prerequisite: CHEM 105. Offered in fall and spring and sometimes in summer.

Gases; thermochemistry; liquids and solids, properties of solutions; introduction to chemical kinetics, chemical equilibria, environmental pollution.

115L General Chemistry Laboratory (1 cr.)

Offered in fall and spring and sometimes in summer.

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Selected experiments in inorganic and organic chemistry. One three-hour lab period.

116L General Chemistry Laboratory (1 cr.)

Prerequisite: CHEM 115L. Offered in fall and spring.

Semi-micro qualitative analysis of selected salts and mixtures. One three-hour laboratory period.

199 Selected Topic for Core Curriculum (3 cr.)

Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

203 Organic Chemistry I (3 cr.)

Prerequisite: CHEM 105. Offered in fall.

Aliphatic and aromatic hydrocarbons, stereochemistry and conformational analysis, ionic and free-radical substitution and addition reactions.

205 Environmental Analytical Chemistry (3 cr.)

This course is not available for credit for students who take CHEM 311.

Prerequisites: CHEM 105 and 106.

Introduction; analytical environmental data: assessment and interpretation, titrimetry, chromatography, atomic spectrometry, mass spectrometry, potentiometric techniques, thermal techniques. Specific applications to the environment. Some laboratory demonstrations will be provided.

206 Analytical Chemistry I (2 cr.)

Prerequisite: CHEM 106. Offered in spring.

Ionic equilibria: solubility, activity and ionic strength. Gravimetry: nucleation and crystal growth, methodology, colloids. Acid-base, complexation, oxidation-reduction and precipitation equilibria and titrations. Introduction to separations in analytical chemistry.

207 Industrial Chemistry I - Chemical Industries (3 cr.)

Prerequisite: CHEM 106. Offered every other semester.

An overview of the history of major chemical industries, global and local production, major products and their production, selected from: metals petrochemicals, agrochemicals, dyes, pharmaceuticals, synthetic resins and plastics, glass and ceramics. Readings from chemical industry literature will also cover latest trends and products. Field trips to local industries.

216L Volumetric and Gravimetric Analysis (2 cr)

Prerequisite: CHEM 116L. Offered in spring.

Acid-base, oxidation-reduction, complexometric and precipitation titrations; gravimetric analysis. Two three-hour periods.

301 Seminar in Science and Technology (1 cr.)

May be taken more than once with the consent of the adviser. Prerequisite: junior

standing. Offered occasionally.

Weekly one-hour seminars in different areas of science and technology to be given by faculty and invited speakers from industries and other scientific communities.

303 Thermodynamics (3 cr.)

Prerequisites: MATH 231, CHEM 206 and PHYS 112. Normally offered in the fall.

Gas laws, state variables and equations of state, energy and the first law, thermochemistry; entropy and the second and the third laws; spontaneity and equilibrium; phase equilibria.

304 Physical Chemistry I (3 cr.)

Prerequisite: CHEM 303. Offered in spring.

Chemical potential and equilibria, solutions and colligative properties, electrolytes, electrochemical cells. Kinetic Theory of Gases.

306 Organic Chemistry II (3 cr.)

Prerequisite: CHEM 203. Offered in spring.

Electrophilic aromatic substitution; spectroscopy and structure; SN_1 , SN_2 , E_1 , and E_2 reactions.

307 Industrial Chemistry II - Production Basics for Chemical Industries (3 cr.)

Prerequisite: CHEM 106. Offered every other semester.

An overview of planning scale-up from laboratory to pilot plant, to production plant, with a focus on models for determining profitability of new projects, new products and new processes. Selected topics from: process design, plant layout and flowsheets, material and energy balances, mass and heat transfer, reactor kinetics, chemical economics, process design strategies. Wherever possible, principles will be demonstrated with slides or videos from actual industries, supplemented by field trips to local plants.

309 Inorganic Chemistry I (3 cr.)

Prerequisites: CHEM 106. Offered in fall.

Basic principles of quantum mechanics as applied to hydrogenic and polyelectron atoms, atomic orbitals, electron-electron interactions, atomic parameters. Molecular orbital theory as applied to diatomic and polyatomic molecules and to solids, bond properties, molecular shape and symmetry, introduction to applications of molecular symmetry in chemistry. The structures of simple solids

310L Organic Chemistry I Laboratory (1 cr.)

Prerequisite: CHEM 115L and 203. Normally offered in the fall.

Characterization of organic compounds by classification tests.

311 Analytical Chemistry II (3 cr.)

Two class periods and one three-hour lab period. Prerequisite: CHEM 206, 216L. Offered in fall.

Instrumental methods of chemical analysis: visible, ultraviolet, and infrared absorption spectroscopy, atomic absorption and emission spectrometry, fluorimetry, X-ray

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diffraction and fluorescence; mass spectrometry, gas chromatography, thermometric and electrochemical methods.

312 Archaeological Chemistry I (3 cr.)

Prerequisite: CHEM 311. Offered occasionally.

Characterization of metals, minerals, pigments, glass, stone, dyes. Dating techniques: thermoluminescence, radiocarbon, amino-acid, Obsidian hydration and potassium/argon. Introduction to Mossbauer spectroscopy and neutron activation analysis.

313L Thermodynamics Laboratory (1 cr.)

Prerequisites: CHEM 106, 216L. Normally offered in the fall.

Experiments in physical chemistry, thermodynamics and error analyses.

314L Physical Chemistry I Laboratory (1 cr.)

Prerequisite: CHEM 313L. Offered in spring.

Experiments in electrochemistry. One three-hour lab period.

315 Biochemistry (3 cr.)

Same as BIOL 315. Prerequisite: CHEM 306. Offered in fall.

The living cell, structure of biomolecules and their relationship to biological functions; biochemical energetics; metabolism of major cellular components and their relationship to clinical conditions. Three class periods or two class periods and one three hour lab period.

316L Organic Chemistry II Laboratory (2 cr.)

Prerequisites: CHEM 203, 306 and 310L. Offered every spring.

Systematic identification of organic compounds, analysis of mixtures (qualitative and quantitative).

318L Inorganic Chemistry Laboratory (1 cr.)

Prerequisite: CHEM 216L. Offered in fall.

Preparations, reactions, and characterization of some inorganic compounds; ion-exchange; chromatography; measurements of stability constants.

325 Clinical Chemistry I (3 cr.)

Two class periods and one three-hour lab period. Prerequisite: CHEM 311 or concurrently, CHEM 315 or consent of instructor. Offered in spring.

Module 1: Principles of laboratory techniques: spectrophotometry, chromatography, mass spectrometry, radioisotopes, electrophoresis, immunochemical techniques, electrochemistry, point-of-care devices, and lab automation. Module 2: Chemometrics: statistical procedures, selection and interpretation of lab procedures, reference intervals, clinical decision limits, quality control and method evaluation. Module 3: Laboratory management, quality and informatics.

399 Guided Studies in Environmental Sciences (3 cr.)

Offered in fall and spring.

Under faculty guidance, the student(s) will carry out a group individual project on an environmental related topic. The student(s) will present their results by submitting a

common/individual report or by passing an examination, as determined by the supervisor.

400 Introductory Quantum Theory & Statistical Thermodynamics (3 cr.)

Prerequisites: MATH 233, CHEM 304 and PHYS 214. Offered in fall.

Basic concepts of quantum mechanics, applications to simple systems; basic concepts of statistical mechanics, application to thermodynamics.

402 Physical Chemistry II (3 cr.)

Prerequisite: CHEM 400. Normally offered in the spring.

Chemical kinetics and dynamics, photochemistry, heterogeneous and homogeneous catalysis, surface chemistry including adsorption, crystal structure.

406 Organic Chemistry III (3 cr.)

Prerequisite: CHEM 306. Offered in spring.

A continuation of the chemistry of monofunctional and polyfunctional compounds, including the chemistry of carbanions, condensation reactions and nucleophilic addition.

407 Industrial Chemistry III - Global Market/International Standards (3 cr.)

Prerequisite: CHEM 106 or consent of instructor. Offered every other semester.

A grounding industrial hygiene/laboratory safety, good laboratory practice, quality and environmental management systems (ISO 9000/1400 etc.) and laboratory certifications. Topics selected from: international and national standards, environmental and safety agencies, toxicology, plant environment and hazards, waste management, safety policies, industrial experimentation and plant visits.

408 Inorganic Chemistry II (3 cr.)

Prerequisite: CHEM 309. Offered in spring.

Coordination chemistry, transition metals and their complexes, theories of metal-ligand bonding, complexes of pi-acceptor ligands and organometallic compounds, reaction mechanisms of d-block complexes. Systematic chemistry of the elements.

410 Archaeological Chemistry II (3 cr.)

Prerequisite: CHEM 312. Offered occasionally.

Environmental degradation, chemical and physical agents of deterioration. Corrosion of metals, methods of preservation of antiquities and general methods of treatment. Conservation of stone. Study of porous solids. Introduction to Mercury porosimetry. Pore size distribution studies.

412L Physical Chemistry II Laboratory (1 cr.)

Prerequisite: CHEM 216L. Offered in spring.

Experiments in physical chemistry emphasizing chemical kinetics. One three-hour lab period.

414 Selected Topics in Chemistry (3 cr.)

Prerequisite: consent of instructor. Offered occasionally.

Topics chosen according to special interests of faculty and students. May be repeated for credit more than once if content changes.

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416L Organic Chemistry (1 cr.)

Prerequisite: CHEM 316L or consent of instructor, and CHEM 406. Offered in fall. Organic synthesis involving organometallic compounds, chemical reduction and oxidation reactions chosen from Claisen, Freidel-Crafts, Hell-Volhard-Zelinsky reactions .etc. The syntheses incorporate chromatography and spectroscopic analysis.

425 Clinical Chemistry II (3 cr.)

Two class periods and one three-hour lab period. Prerequisites: CHEM 325. Offered in fall. Module 1. Clinical analytes: amino acids, proteins, nucleic acids, lipids, carbohydrates, electrolytes, clinical enzymology, clinical toxicology, tumor markers, therapeutic drug monitoring, and vitamins. Module 2. Pathophysiology: hepatic, cardiac, renal, gastric, and pancreatic diseases, acid-base disorders, endocrine function, bone disease, organ transplantation, pregnancy and fetal development, and biochemical aspects of hematology.

430L Advanced Practical Organic Chemistry (3 cr.)

Prerequisite: CHEM 316L. Offered occasionally.

Advanced organic multistep syntheses, identification of products by spectroscopy, semimicro quantitative determination of organic compounds.

435 Advanced Organic Chemistry (3 cr.)

Prerequisite: consent of instructor. Offered occasionally.

Specialized topics in the field of organic chemistry chosen according to specific interests; e.g. polynuclear aromatic compounds, heterocyclic compounds, carbohydrates, proteins, nucleic acids, physical organic chemistry.

440 Molecular Symmetry and Applications (3cr.)

Prerequisite: consent of instructor. Offered occasionally.

Molecular symmetry: basic principles and applications, molecular vibrations, construction of hybrid orbitals, delocalized molecular orbitals with emphasis on pi orbitals, ligand field spectra and construction of energy-level diagrams.

444 Independent Study (1-3cr.)

Prerequisite: consent of instructor, senior standing.

In exceptional circumstances some senior Chemistry students, with departmental approval, may arrange to study a selected topic outside of the regular course offerings. The student and faculty member will select a topic of mutual interest and the student will be guided in research and readings. The student would demonstrate achievement either by submitting a report or passing an examination, according to the decision of the supervisor. A student may earn up to a total of three credits. May be taken more than once if content changes.

450 Electrochemistry (3 cr.)

Prerequisites: CHEM 304, 314L or concurrent. Offered occasionally.

Electrochemical processes, irreversible electrodes and cells; dissolution and corrosion of metals; passivity, electrolytic reduction and oxidation; applications of electrochemistry to fuel cells, electrodialysis, electrophoresis, molten salt cells, etc. Three class periods or two class periods and one three-hour lab period.

495 Senior Thesis and Seminar (3cr.)

Prerequisite: senior standing. Offered in fall and spring.

Methods used in obtaining and reporting the results of research. Each student selects a topic in his/her field of interest under the supervision of a faculty member, prepares an outline, assembles a bibliography, and makes a study plan to be followed in preparing his project. After finishing the project, each participant then makes an oral presentation of his/her chosen topic. A written thesis has to be completed after criticism and suggestions. May be substituted by a 400-level course in chemistry or other sciences with the approval of the department.

General Science Courses (SCI)**105 Science and Technology of Ancient Egypt (3 cr.)**

Offered in fall and spring.

Development of civilization in ancient Egypt. Primitive time reckoning and measurement. Building materials. Outline of the different chemical arts and crafts which developed in Egypt as interpreted from mural paintings and works of art. Mummification. Aspects of mathematics and medicine in ancient Egypt.

109 Exploration of the Universe (3 cr.)

Offered in fall and spring.

An introduction to historical and conceptual developments in astronomy. Stars and galaxies: the sun as a case history in stellar evolution; the formation of elements in the stars. A survey of the sky with particular attention to the solar system: the members of the solar system as physical bodies with specific structures and as entities whose motion characteristics can be understood and predicted.

120 Scientific Thinking (3 cr.)

Offered in the fall and spring.

The course emphasizes the unifying aspects of the scientific approach to the study of nature and human behavior. About one-third of the course is devoted to scientific inquiry and investigation. The course focuses on fact identification and concept formation and testing. In the remaining parts, the students are exposed to applications of the approach in various disciplines. The course sets some basic concepts and theories of science into broad historical, philosophical, and cultural context and traces the development of these theories to their present status. This serves the double purpose of acquainting students with the appropriate setting in which a given idea gained relevance and exposing them to the evolution toward the current methods of investigation. Moral and ethical issues in science are examined.

140 Archaeometry (3 cr.)

Offered in spring.

Description and provenance of archaeological materials. Interaction between Art and Science: i. the detection of forgery; ii. the dating of archeological materials. Introduction to the scientific techniques used to study archaeological materials. An interdisciplinary approach.

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150L General Science Laboratory (1 cr.)

One three-hour lab period. Offered in fall and spring.

Introduction to experimental techniques of measurement in the general fields of physics, chemistry, and other sciences.

250 Introduction to Geology (3 cr.)

Prerequisite: Thanawayya Amma or equivalent. Offered in fall and spring.

Fostering a basic understanding of the physical environment and the nature of forces at work that shape our dynamic planet, this course provides an introduction to the material, origin, history, internal structure of the earth and the presently accepted system unifying plate tectonics, continental drift and sea floor spreading. The economic contribution of geology to development with an emphasis on Egypt is included.

251L Introduction to Geology Lab (1 cr.)

One three-hour lab period. Offered in fall and spring.

Introduction to the physical properties of the earth material. Identification of minerals and all types of rocks; mode of preservation and identification; of fossils; topographic maps and map readings; geological maps and cross sections; remote sensing (aerial photography).

260 Environmental Geology (3 cr.)

Offered once a year.

Environmental geology is applied geology focussing briefly on the entire spectrum of possible interactions between people and the physical environment.

302 Science, Technology and the Environment (3 cr.)

Prerequisites: Junior standing or higher. Offered occasionally.

An introductory, multidisciplinary approach to studying the relationships between science, technology and the environment. Principles of ecosystem structure, function, balance, communities and populations. Principles of environmental sciences, outline of crises, overpopulation, depletion and pollution. Framework for understanding environmental problems. Group projects, aimed at exploring broad range of environmental issues from an interdisciplinary approach, constitute a major component of the course.

450 Geology of Raw Materials (3 cr.)

Prerequisite: SCI 250 or consent of instructor. Offered occasionally.

An interdisciplinary study. The geology of naturally occurring minerals, methods for determining the utility of natural resources, and the environmentally sound industrial conversion of raw materials. Particular attention given to the natural resources of Egypt, especially to their importance in economic development.

Classical/Medieval Islamic History

Minor - See Arabic Studies

Comparative Religion

Courses - See History

COMPUTER SCIENCE

Department of Computer Science
School of Sciences and Engineering

Distinguished Lecturer: K. El-Ayat

Professors: A. Goneid, A. Khalil, M. N. Mikhail (Chair), A. S. Mohamed

Associate Professors: A. Abdelbar, A. El-Kadi, M. Mahmoud

Assistant Professors: A. Zeid, S. El-Kassas

Computer science as described by CAC the Computing Accreditation Commission of ABET is "the body of knowledge concerned with computers and computation. It has theoretical, experimental, and design components and includes (1) theories of understanding computing devices, programs, and systems; (2) experimentation for the development and testing of concepts; (3) design methodology, algorithms, and tools for practical realization; and (4) methods of analysis for verifying that these realizations meet requirements."

Bachelor of Science

The undergraduate program in Computer Science at AUC is accredited by CAC. The objectives of the program are: to provide a coherent and broad-based coverage of the discipline of computing and to prepare students for entry into the computing profession, for graduate studies in the field and for meeting the general challenges of their professional and personal life in a field where radical change is the norm.

The course of study offers a broad-based intellectual engagement with computing both in theory and practice as well as logic and capabilities. The theoretical ground, abstraction, design as well as the professional practice levels (technical competence, team work, problem solving and communication skills), social and ethical contexts of the discipline of computing are well integrated into the curriculum that the department offers.

The study program is designed to prepare students for a wide variety of careers. The most profound positions that our graduates are well prepared to occupy (or have already been engaged in) may be classified into the following professional disciplines: Software Engineering, Systems Design and Programming, Applications design and programming and Information-Systems design and analysis. The program also prepares students for further studies and research in the computing field.

A total of 142 credits is required for a bachelor's degree in computer science:

Core Curriculum (30-42 credits)

Computer Science Requirements (60 credits):

a) Concentration Requirements (42 credits)

CSCI	106	Fundamentals of Computer Science, 3 cr.
	110	Programming Fundamentals, 3 cr.

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CSCI	210	Data Structures and Algorithms, 3 cr.
	230	Digital Logic Design, 3 cr.
	239L	Digital Logic Design Lab, 1 cr.
	231	Computer Organization & Assembly Language Programming, 3 cr.
	321	Analysis & Design of Algorithms, 3 cr.
	325	Concepts of Programming Languages, 3 cr.
	330	Computer Architecture, 3 cr.
	339L	Computer Architecture Lab, 1 cr.
	341	Software Engineering, 3 cr.
	345	Operating Systems, 3 cr.
	422	Theory of Computing, 3 cr.
	447	Compiler Design, 3 cr.
	490	Industrial Training, 1 cr.
	491	Senior Project I, 1 cr.
	492	Senior Project II, 2 cr.

b) Computer Science electives (18 credits)

To be chosen in consultation with the student's advisor from the following:

CSCI	253	Fundamentals of Database Systems, 3 cr.
	315	Programming Language, 1-2 cr.
	316	Advanced Programming in JAVA, 3 cr.
	317	Object Oriented Programming, 3 cr.
	333	Data and Computer Communications, 3 cr.
	356	Systems Simulation, 3 cr.
	358	Systems Analysis and Design, 3 cr.
	427	Introduction to Artificial Neural Networks, 3 cr.
	430	Computer Hardware Design and Applications, 3 cr.
	435	Wide Area Networks, 3 cr.
	437	Local and Metropolitan Area Networks, 3 cr.
	441	Object-Oriented Analysis and Design, 3 cr.
	445	Fundamentals of Distributed Systems, 3 cr.
	446	Computer Security, 3 cr.
	453	Database Systems, 3 cr.
	455	Computer Graphics, 3 cr.
	456	Design of Web-Based Systems, 3 cr.
	465	Artificial Intelligence, 3 cr.
	485	Selected Topics in Computer Science, 1-3 cr.
	495	Guided Studies in Computer Science, 1-3 cr.
MATH	304	Numerical Methods, 3 cr.

Collateral Requirements (31 credits)

PHYS	111	Classical Mechanics, Sound and Heat, 3 cr.
	112	Electricity and Magnetism, 3 cr.
	123L	General Phys. Lab I, 1 cr.
	124L	General Phys. Lab II, 1 cr.
	215	Introduction to Circuit Analysis and Devices, 3 cr.
	221L	Intermediate Physics Lab I, 2 cr.
	132	Calculus & Analytic Geometry II, 3 cr.

MATH	200	Discrete Mathematics, 3 cr.
	231	Calculus & Analytic Geometry III, 3 cr.
	233	Differential Equations, 3 cr.
	303	Linear Algebra, 3 cr.
	317	Probability and Statistics, 3 cr.

Electives (9-21 credits)

Minor

A minor in Computer Science provides students from other disciplines with basic knowledge and practice in computing that would enable them to develop simple or advanced applications in their field of study.

A minor in Computer Science is comprised of 15 credits. Students select the sequence of computer science courses, with the help of their advisor, according to their needs and interests. The choice should include at least 9 credits out of the Computer Science concentration requirements and should not include CSCI 315. Students are required to plan their courses such that no more than six Computer Science credits are taken in one semester.

Recommended Options for Minor:

Theoretical Aspects in Computer Science: Recommended for Math major students: CSCI 106, 110, 210, 321 & 422.

Data Base Systems: Recommended for Business, Economics & Engineering majors students: CSCI 106, 110, 210, 253 & 453.

Computer Systems: Recommended for Physics, Mechanical & Construction majors students but not permitted for Electronic Engineering major: CSCI 106, 110, 210, 230 & 231.

Embedded Systems: Recommended for Electronics Engineering major students only: CSCI 106, 110, 210, 345 & 430.

Computer Science Courses (CSCI)

102 Introduction to Computers and their Applications (3 cr.)

Offered in fall and spring.

Introduction to computer-related terms and concepts. Scope limitations of the computer capabilities. Ethics and social impact of using computers. Basic skills related to the familiarity and efficient use of computer input/output devices, operating systems and computer communications. Training on popular computer applications (e.g. word processing, spread sheet, database and presentation graphics). Limited programming experience in a high-level language. This course is intended for arts students.

106 Fundamentals of Computer Science (3 cr.)

Prerequisite: College level preparation course in mathematics or MATH 100. Offered in fall and spring.

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Introduction to the discipline of computing. Computer systems, number systems, data representation and basic computer organization. Basic Math concepts, functions and propositional logic. Problem solving, abstraction, design and programming. Selection structures, repetition and loop statements. Modular programming. Basic testing and debugging of programs. Introduction to programming in C++. Professional Ethics for computer professionals.

110 Programming Fundamentals (3 cr.)

Prerequisite: CSCI 106. Offered in fall and spring.

Overview of basic programming constructs. Functions, parameter passing and files. Data modeling with arrays, structures and classes. Pointers and linked lists. Recursion. Basic program design and analysis, testing and debugging techniques. Programming in C++. Program development using modern APIs.

201 Information Technology (3 cr.)

Prerequisite: Sophomore standing or higher. Offered once every year.

Module 1: The Components of Information Technology: data technology, processing technology, and networking technology. Module 2: Computer Ethics and Social Issues. Module 3: Business, Economic and Development Impacts of Information Technology. Module 4: Computer Applications (in which students will be given the chance to create, modify and interact with sophisticated computer applications.)

210 Data Structures and Algorithms (3 cr.)

Prerequisite: CSCI 110. Offered in fall and spring.

The role of data structures in software engineering and algorithm design. Abstract data types and classes: concepts, data models, and levels of abstraction. Recursion. Analysis of algorithms. Elementary data structures and their implementation: arrays, strings, structures and files. Specification, implementation and application of stacks, queues, lists, trees and graphs. Searching and sorting algorithms.

230 Digital Logic Design (3 cr.)

Same as PHYS 319, EENG 210. Prerequisite: CSCI 104 or 106. Offered in fall and spring. The nature of digital logic and numbering systems. Boolean algebra, Karnaugh map, decision-making elements, memory elements, latches, flip-flops, design of combinational and sequential circuits, integrated circuits and logic families, shift registers, counters and combinational circuits, adders, subtractors, multiplication and division circuits, memory types. Exposure to Logic Design automation software. The laboratory component will cover experiments in digital electronics.

231 Computer Organization and Assembly Language Programming (3 cr.)

Same as EENG 352. Prerequisite: CSCI 110. Offered in fall and spring.

Description of a hypothetical computer system, the CPU main memory, I/O subsystem and all related components. In-depth discussion of the architecture of the Intel 80x86 based microprocessors and of available assemblers, linkers, library managers and debugging tools. Macro assembler programming techniques involving building, incorporating and maintaining libraries, and using assembler pseudo-ops and directives. Debugging and testing techniques. Interfacing a high level language with an assembly

language. Chip level programming of microprocessor type systems. Topics covered include I/O ports, I/O devices and controllers, DMA channels, priority interrupts.

239L Digital Logic Design Lab (1 cr.)

Same as EENG 218 and PHYS 320L. Prerequisite: Concurrent with CSCI 230. Offered in fall and spring.

The laboratory will cover experiments in digital design and experiments illustrating material of course CSCI 230.

253 Fundamentals of Database Systems (3 cr.)

Prerequisite: CSCI 210. Offered in fall and spring.

Basic concepts, database system environment, DBMS. Components and architecture access structures, indexing and hashing, high-level data models, ER and EER model, the relational model, relational languages, relational algebra, relational calculus, SQL, introduction to functional dependencies and normalization, social and ethical context of databases.

315 Programming Language (1-2 cr.)

Prerequisite: CSCI 210. Offered occasionally.

A programming language different from those studied in CSCI 106 and 110 will be presented according to the interest of both students and faculty. Students may repeat this course with different languages but only a maximum of four credits can be counted toward the concentration requirements.

316 Advanced Programming in Java (3 cr.)

Prerequisite: CSCI 210. Offered occasionally.

Advanced programming concepts in the Java programming language. Virtual machines, dynamic type checking and object serialization, inheritance and polymorphism in Java, interfaces and packages. Java Applets and event handling. Multithreaded and Network-based application development in Java. File manipulation in Java and coverage of selected topics including Remote Method Invocation, Cryptography and Web Services.

317 Object Oriented Programming (3 cr.)

Prerequisite: CSCI 210. Offered Occasionally.

In-depth study of a typical object-oriented programming language (C++) from a software engineering perspective, with emphasis on features supporting the development of large, efficient and reusable object-oriented applications. Principles and practice of three software development paradigms: developing classes from scratch, reuse of existing classes, incremental extension of frameworks. Encapsulation, templates, polymorphism, dynamic binding and virtual methods, operator's overloading, complex associations, dynamic aggregation, inheritance (single and multiple), exception handling, the standard template library. Introduction to UML for describing program designs.

321 Analysis and Design of Algorithms (3 cr.)

Prerequisites: CSCI 210 and MATH 200. Offered in fall and spring.

Design and analysis of basic classes of algorithms: Divide and conquer, greedy

methods, tree and graph traversals, and backtracking. Applications to problems such as sorting and searching, traveling salesperson, and knapsack. Theory of complexity.

325 Concepts of Programming Languages (3 cr.)

Prerequisites: CSCI 210 and 231. Offered in fall and spring.

Comparative study of abstraction, syntax, semantics, binding times, data and sequence control, run-time resources, translators, and storage of programming languages. Programming projects using selected programming languages to enhance practical aspects.

330 Computer Architecture (3 cr.)

Same as EENG 455. Prerequisites: CSCI 230 and 231. Offered in fall and spring.

The objectives of this course are to introduce the principles of Modern Computer Architecture and design. Topics to be discussed include Instruction Set Architectures, Arithmetic Logic Unit design, CPU data path design, CPU pipelining, memory hierarchy, cache and virtual memory, and introduction to I/O.

333 Data and Computer Communications (3 cr.)

Prerequisites: CSCI 210 and PHYS 215. Offered in fall and spring.

Data transmissions. Transmission media, data encoding, data link control, and multiplexing. Introduction to wide area networks and local area networks technology and systems.

339L Computer Architecture Lab (1 cr.)

Same as EENG 458. Prerequisite: Concurrent with CSCI 330. Offered in fall and spring.

The laboratory will cover experiments in computer architecture and hardware design and experiments illustrating material of course CSCI 330.

341 Software Engineering (3 cr.)

Prerequisites: CSCI 210 and 325. Offered in fall and spring.

Basic concepts of software engineering project management, ethical and social issues as well as the software development life cycle. Techniques for software specification, design, implementation, validation, verification and documentation. State-of-the art tools for computer-aided software engineering (CASE tools) are used to support term projects.

345 Operating Systems (3 cr.)

Prerequisite: CSCI 330. Offered in fall and spring.

Operating systems concepts and structure. The Kernel, interrupts, system calls. Process concepts, operations, and implementation. Threads. Concurrency, interprocess communication and synchronization. Process scheduling. Resources and deadlocks. Memory management: swapping, paging, segmentation, virtual memory. File system interface, organization, and implementation. Protection. Case study: UNIX.

356 Systems Simulation (3 cr.)

Prerequisites: CSCI 210 and MATH 317. Offered occasionally.

Simulation modeling with emphasis on discrete event simulation. The design of a simulation experiment. Simulation languages. Probability and distribution theory. Statistical estimation and inference. Random number generators. The generation of

random variates. Verification and validation techniques. Presentation of a number of typical simulation models. Students work in teams on a term project.

358 Systems Analysis and Design (3 cr.)

Prerequisite: CSCI 253, or concurrent. Offered occasionally.

General concepts and problem-solving steps of systems analysis, introduction to systems analysis, feasibility study, system study and system design, implementation and control. A term project is required.

401 Internet-based Information Systems (3 cr.)

Same as MOIS 432. Pre-requisite: CSCI 201. Offered in fall and spring.

The World Wide Web as a business domain, E-Business and E-Commerce, Network Options and Infrastructure, HTML/XML and WWW Site Design, Emerging technologies, WWW Tools, Internet Issues and Implications (Security issues, social and ethical issues, legal issues), Costs and Resources, Internet Services Providers.

422 Theory of Computing (3 cr.)

Prerequisites: MATH 200 and Senior standing. Offered in fall and spring.

Finite automata and regular expressions, context-free grammars and push-down automata, nondeterminism. Context-sensitive grammars and the Chomsky hierarchy of grammars. Turing machine and the halting problem. Undecidable problems. Church's Conjecture and its implications.

427 Introduction to Artificial Neural Networks (3 cr.)

Prerequisites: CSCI 210, MATH 231 and MATH 303. Offered Occasionally.

An introduction to basic concepts in the design, analysis, and application for computational neural networks. Mathematical models of biological neurons. Multilayer perceptrons backward error propagation. Hopfield networks and Boltzmann machines. Radial-basis function networks. Kohonen self-organizing feature maps. Adaptive Resonance Theory networks.

430 Computer Hardware Design and Applications (3 cr.)

Prerequisite: CSCI 330. Offered occasionally.

FPGs. CPLDs. Processor design philosophy (CISC vs RISC). Advanced pipelining. Super scalar. Instruction-level parallelism. Designing I/O systems. System buses. Cache design. Reconfigurable computer machines. Systolic architectures. Micro controllers. Device interfacing and VHDL.

435 Wide Area Networks (3 cr.)

Prerequisite: CSCI 333. Offered in fall.

Communication architecture and protocols. Networks, internetworking and transport protocols. Issues of mobile computing, network security, and network applications.

437 Local and Metropolitan Area Networks (3 cr.)

Prerequisite: CSCI 333. Offered in spring.

Introduction to LAN, MAN and WAN. Topologies and transmission media. Protocol Architecture and Logical Link Control. Traditional LANs. High-Speed Ethernet-Like LANs, FDDI. ATM LANs. Wireless LANs. Network performance and management.

441 Object-Oriented Analysis and Design (3 cr.)

Prerequisite: CSCI 341. Offered occasionally.

The structure of complex systems. The evolution and elements of the object model. The nature of objects and classes. Relationships among classes and objects. Object-oriented analysis and design. Putting key object-oriented techniques to work in constructing large-scale software systems. Case studies covered to demonstrate the use of an object-oriented development process in the construction of software systems. Object-oriented metrics. Testing object-oriented software. Performance evaluation. Advanced topics including design patterns and component-based software development.

445 Fundamentals of Distributed Systems (3 cr.)

Prerequisite: CSCI 345. Offered occasionally.

Introduction to distributed systems. Modeling, specifications, consistency, fault tolerance, interprocess communication, network and distributed operating systems, distributed mutual exclusion, distributed deadlock detection, load balancing and process migration.

446 Computer Security (3 cr.)

Prerequisite: CSCI 345. Offered occasionally.

Fundamentals of computer security. Identification and authentication. Access control, different approaches for inclusion of a security kernel. Security in UNIX and Windows. How security is broken and how it is evaluated. Distributed systems security, World Wide Web security, and network security. Practical experience to be gained through an assigned project to evaluate the security of a real operational system.

447 Compiler Design (3 cr.)

Prerequisites: CSCI 325 and 422. Offered in fall and spring.

Principles and practices in the design of compilers. Lexical analysis. Syntax analysis, top-down and bottom-up parsing. Syntax-directed translation and syntax trees. Declarations, types, and symbol management. Run-time environments, storage organization, parameter passing, dynamic storage allocation. Intermediate languages and intermediate code generation. Code generation and optimization. Project: students construct a simple compiler that generates unoptimized code.

453 Database Systems (3 cr.)

Prerequisite: CSCI 253. Offered occasionally.

Advanced relational database theory: functional dependencies, multivalued dependencies, join dependencies, inclusion dependencies. System catalog implementation, query optimization techniques, transaction processing, concurrency control, database security, backup and recovery strategies. Advanced data modeling (e.g. object-oriented databases), distributed and client server architectures, and further exposure to social and ethical issues in databases.

455 Computer Graphics (3 cr.)

Prerequisites: CSCI 210 and MATH 303. Offered occasionally.

Overview of graphic systems and interactive devices. Output primitives and their attributes. Two-dimensional transformations, segments, windowing, and clipping. Introduction to three-dimensional representation and viewing.

456 Design of Web-based Systems (3 cr.)

Prerequisites: CSCI 341 or concurrent. Offered in fall and spring.

Introduction to the Web as a platform, the Web as an n-tier client-server architecture, basic components of a web-based application, developing static and dynamic web pages. Enhancing Web pages using Scripting languages. Developing Web-based applications. Using Server-extension techniques and tools. Introduction to XML and its associated technologies. Emerging technologies and tools on the web. Wireless Web protocols and techniques.

465 Artificial Intelligence (3 cr.)

Prerequisites: CSCI 325 and MATH 200. Normally offered in fall.

Problem spaces and application areas in engineering and science. LISP or PROLOG programming. AI architecture, knowledge representation, hierarchical planning. Machine learning and Connectionist models. Parallel and distributed AI. Object-oriented Knowledge representations. Students will use an AI programming language to solve some of the famous AI problems.

485 Selected Topics in Computer Science (1-3 cr.)

Prerequisite: permission of instructor. Offered in fall and spring.

Topics chosen according to special interests of faculty and students. May be repeated for credit more than once if content changes.

490 Industrial Training (1 cr.)

Prerequisite: junior standing. Offered in fall and spring.

Each student is required to spend a minimum of eight weeks in some related computer training in Egypt or abroad. A report followed by discussion is submitted to a departmental committee for evaluation. Graded pass or fail.

491 Senior Project I (1 cr.)

Prerequisites: CSCI 341 or concurrent and Senior standing. Offered in fall and spring.

Participating students select project topic according to their subject of interest and the availability of facilities and advisors. Students carry out necessary preliminary work and submit a progress report. Ethical responsibilities of a computing professional are covered by lectures and seminars and emphasized through the student's team work.

492 Senior Project II (2 cr.)

Prerequisite: CSCI 491. Offered in fall and spring.

Participating students carry on the plan of work they developed in CSCI 491. Each participant gives an oral presentation of his/her results. On the approval of the supervisor, each group prepares and presents a complete package. Further ethical issues of the computing profession are covered and emphasized all over the course work.

495 Guided Studies in Computer Science (1-3 cr.)

Prerequisite: consent of instructor. Offered in fall and spring.

Under the guidance of a faculty member, the student carries on a reading, research, or a project on a specific computer-science topic. The student will present his/her results by submitting a report or passing an examination as determined by the supervisor.

CONSTRUCTION ENGINEERING

Department of Construction Engineering
School of Sciences and Engineering

Professors: E. Fahmy (IEP Director), M. Haroun (Dean of Sciences & Engineering), E. Imam, S. Khedr (CENG Chair), E. Smith

Associate Professors: A. Ezeldin, A. Hassanein, A. Sherif, M. Abou Zeid

The construction industry is the largest industry in Egypt and much of the world. Construction engineering is a relatively new field that is designed to foster technological advances in the industry, to utilize modern design techniques, and to develop means to improve production, products, components and subsystems, and distribution and utilization of equipment. Construction engineering covers the basic civil engineering components such as structures, geotechnical, water resources, transportation, and environmental engineering. In addition, it covers, in detail, methods for the modeling of construction projects, numerical simulations, the evaluation of various construction strategies, and construction quality control. It deals with organizational planning, financial and human resources management, productivity measurement, accounting, information systems, strategy and policy formation, contracting, and construction law.

Bachelor of Science

As part of the American University in Cairo, the mission of the Department of Construction Engineering is to provide a high quality engineering education within a liberal arts context to students from Egypt as well as from other countries. The aim is to produce generations of engineers who will be leaders in their profession, and capable of managing projects and construction organizations. The pursuit of excellence is central to the department's mission, maintaining high standards of academic achievement, professional behavior, and ethical conduct.

Students are educated to acquire an appreciation of their responsibilities to society, and to prepare themselves for successful careers and leadership. The program provides an environment in which students develop their critical thinking capabilities, problem solving skills, communication skills in English, and proficiency in the tools of learning.

The specific objectives of the Construction Engineering program are to: educate students in fundamentals of science and engineering with emphasis on construction engineering applications; enable students to integrate various design, economic, and management aspects of engineering to plan for construction operations and to fit in construction organizations; prepare students to cope with and improve on the ever-evolving technologies in production, products, and components of the construction industry; train students to communicate effectively, work independently and in teams, and fit in a multi-discipline environment; inspire students to recognize and consider the impact of engineering solutions in a global and societal context with the ability to understand and be sensitive to other cultures; motivate students to engage

in life-long learning and develop their ability to pursue graduate studies; develop students who are creative, possess qualities of leadership, and are committed to professional and ethical conduct.

The program is accredited by both the American Accreditation Board for Engineering and Technology (ABET) and the Supreme Council of Egyptian Universities.

Students are admitted to the construction engineering program either upon admission to AUC or after successful completion of criteria courses. High school students with mathematics/science background are accepted depending on their High School grades and the available quota in the construction engineering department.

Undeclared and transfer students are admitted to the program upon completing criteria courses in sciences. Students are accepted based on their GPA and on available quota in the department.

Students should consult the course listings and their faculty advisor on a regular basis to ensure that prerequisites for engineering core, concentration and elective courses are met. A model course plan for the Major is provided in the Department of Construction Engineering Office.

A total of 162 credits is required for the bachelor of science degree in construction engineering:

Core Curriculum (30-42 credits)

- The natural science requirement of the core curriculum electives is met within the Engineering core requirements. (4 credits)
- Students should take MGMT 307 for the liberal arts elective.

Engineering Core Requirements (52 credits)

CHEM	105	General Chemistry I, 3 cr.
	115L	General Chemistry I Lab, 1 cr.
PHYS	111	Classical Mechanics, Sound and Heat, 3 cr.
	123L	General Physics I Lab, 1 cr.
	112	Electricity and Magnetism, 3 cr.
	124L	General Physics II Lab, 1 cr.
CSCI	106	Introduction to Computer Programming, 3 cr.
MATH	131	Calculus & Analytical Geometry I, no credit
	132	Calculus & Analytical Geometry II, 3 cr.
	231	Calculus & Analytical Geometry III, 3 cr.
	233	Differential Equations, 3 cr.
	317	Probability and Statistics, 3 cr.
ENGR	101	Introduction to Engineering, 1 cr.
	115	Descriptive Geometry and Engineering Drawing, 2 cr.
	212	Engineering Mechanics I (Statics), 3 cr.

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ENGR	214	Engineering Mechanics II (Dynamics), 3 cr.
	229	Strength and Testing of Materials, 4 cr.
	261	Fundamentals of Fluid Mechanics, 3 cr.
	313	Engineering Analysis and Computation I, 3 cr.
	318	General Electrical Engineering, 3 cr.
	345	Engineering Economy, 3 cr.

Concentration Requirements (65 credits)

CENG	215	Drawing for Construction Engineering and Architecture, 1 cr.
	280	Construction Surveying, 3 cr.
	302	Structural Analysis I, 3 cr.
	303	Structural Analysis II, 3 cr.
	304	Design of Reinforced Concrete Structures, 3 cr.
	311	Fundamentals of Hydraulic Engineering, 3 cr.
	321	Introduction to Architectural Engineering, 3 cr.
	323	Construction Materials and Quality Control, 4 cr.
	325	Mechanical Engineering in Construction, 3 cr.
	331	Geology for Engineers, 2 cr.
	403	Design of Steel Structures, 3 cr.
	411	Soil Mechanics, 4 cr.
	423	Methods and Equipment for Construction I, 3 cr.
	424	Methods and Equipment for Construction II, 2 cr.
	431	Transportation Engineering, 3 cr.
	441	Introduction to Construction Management and Cost Estimating, 3 cr.
	442	Construction Project Specifications, Bids, and Contracts, 3 cr.
	446	Techniques of Planning, Scheduling and Control, 3 cr.
	448	Financial Management and Accounting in Construction, 3 cr.
	461	Design and Construction of Foundations and Retaining Structures, 3 cr.
	471	Environmental and Sanitary Engineering, 3 cr.
	490	Senior Project I, 1 cr.
	491	Senior Project II, 2 cr.
	497	Practical Training, 1 cr.

Concentration Electives (9 credits):

Three credits should be taken from the science department and a minimum of 6 credits from the following courses including 3 credits in design:

CENG	420	Design of Interior Space, 3 cr.
	421	Architectural Design, 3 cr.
	426	Steel and Concrete Bridges, 3 cr.

CENG	427	Prefabricated Water and Prestressed Concrete Structures, 3 cr.
	428	Building Finishes, 3 cr.
	432	Design of Irrigation Systems, 3 cr.
	449	Systems Analysis for Construction Engineers, 3 cr.
	452	Structural Systems and Advanced Design, 3 cr.
	462	Applications in Geotechnical Engineering, 3 cr.
	480	Special Problems in Construction Engineering, 1 -3 cr.
	481	Development of Highway Facilities, 3 cr.
	494	Selected Topics in Construction Engineering, 3 cr.

General Electives (0-6 credits):

Students may take courses of their selection to satisfy program requirement of 162 credit hours.

Minor in Architectural Design

The minor in Architectural Design provides students with an understanding of the underlying principles of architectural design. It serves students in all majors. It is especially useful for students interested in pursuing careers in the development, finance, construction and/or promotion of building related activities. It is also important for other students with social, cultural, and art backgrounds, who are interested in the respective aspects of the built environment. Construction engineering students will also benefit from the minor by becoming better qualified in the challenging activities of the construction industry.

Students from any discipline may apply for the Minor. A limited number will be accepted every semester. The following requirements must be satisfied for joining and continuing in the minor:

1. A minimum GPA of 2.7 to be accepted in the minor.
2. A minimum grade of "B-" in the basic architectural design courses (ENGR 115, CENG 215 and CENG 321) to continue in the minor.

The Minor requires completion of 15 credit hours. These are:

Basic Architectural Design Requirement (6 cr. hours):

All of the following courses:

ENGR 115	Descriptive Geometry and Engineering Drawing, 2 cr.
CENG 215	Drawing for Construction Engineering & Architecture, 1 cr.
CENG 321	Introduction to Architectural Engineering, 3 cr.

Background Humanities and Fine Arts Elective Requirement (3 cr. hours):

One of the following courses:

ARBS 270	Introduction to Islamic Art and Architecture, 3 cr.
OR ARBS 271	Introduction to Islamic Art and Architecture, 3 cr.

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OR	ARTV 314	Modern and Contemporary Architecture, 3 cr.
OR	EGPT 261	Art and Architecture of Ancient Egypt I, 3 cr.
OR	EGPT 262	Art and Architecture of Ancient Egypt II, 3 cr.

Main Architectural Design Requirement (6 cr. hours)

All of the following courses:

CENG 420	Design of Interior Spaces, 3 cr.
CENG 421	Architectural Design, 3 cr.

Construction Engineering students may not count the main architectural design courses (CENG 420 & CENG 421) for both the Construction Engineering Major and the Architectural Design Minor.

Construction Engineering Courses (CENG)

215 Drawing for Construction Engineering and Architecture (1 cr.)

Prerequisite: ENGR 115. Offered in fall and spring.

Architectural and structural drawings. Roads and hydraulic works drawings. Construction details. Electro-mechanical drawings for construction. One three-hour lab period.

222 Architecture: Art or Engineering (3 cr.)

Same as ARTV 222.

Architecture, the art and science of designing buildings, is utilized to contrast the "Arts" and "Engineering" approaches to design. The course addresses issues related to form and space generation, function and interior environment, as well as exterior and site considerations. The aspects of materials and construction are considered. Famous buildings and architectural styles will be critically analyzed from the perspectives of both the artist and the engineer.

280 Construction Surveying (3 cr.)

Prerequisite: MATH 132. Offered in fall and spring.

Principles of plane surveying: methods of measuring distances, angles and differences in heights (levels); traverse computations; setting out horizontal and vertical curves; earthwork computation; setting out engineering structures and construction projects.

302 Structural Analysis I (3 cr.)

Prerequisite: ENGR 212. Offered in fall and spring.

Analysis of statically determinate structures under static loads; member forces in trusses, shear and moment diagrams, deflections, simple application of the matrix displacement method.

303 Structural Analysis II (3 cr.)

Prerequisites: CENG 302 and ENGR 229. Offered in fall and spring.

Analysis of statically indeterminate structures by three-moment equation, the method of consistent deformation, slope-deflection, moment distribution. Approximate

analysis of statically indeterminate structures. Matrix force and displacement methods for beams and frames analysis. Computer application is for structural analysis.

304 Design of Reinforced Concrete Structures (3 cr.)

Prerequisite: CENG 303 or concurrent. Offered in fall and spring.

Properties of plain concrete and reinforced concrete, behavior of composite sections, ultimate strength and working stress design of structural elements, beams, columns, one-way and two-way solid slabs, detailing of reinforcing steel.

311 Fundamentals of Hydraulic Engineering (3 cr.)

Two class periods and one three hour lab period. Prerequisite: ENGR 261 and 313. Offered in fall and spring.

Introduction to water resources projects, pipelines and pipe networks, pumps, open channel flow, sediment transport, hydraulic structures, seepage and groundwater flow, dimensional analysis.

321 Introduction to Architectural Engineering (3 cr.)

Prerequisites: CENG 215. Offered in fall and spring.

Role of the architect in building construction. Architectural design fundamentals. Building components and materials. Architectural drawing.

323 Construction Materials and Quality Control (4 cr.)

Prerequisite: ENGR 229. Three class periods and one three-hour lab period. Offered in fall and spring.

Types and properties of construction materials and components. Concepts of quality control, statistical evaluation and corresponding experimental work. Aggregates types, sources and quality. Inorganic cements. Concrete mix design, admixtures and quality control. Asphalt cement, asphalt concrete mix design and quality control. Steel in construction. Masonry materials, timber, insulation materials and coatings.

325 Mechanical Engineering in Construction (3 cr.)

Prerequisite: ENGR 261. Two class periods and three-hour lab period. Offered in fall and spring.

Fundamentals of energy transformation and exchange systems. Sizing, matching and installation of electrical, mechanical, plumbing, heating, ventilation and air conditioning (HVAC) and machining systems.

331 Geology for Engineers (2 cr.)

Prerequisite: CENG 280. Offered in fall and spring.

Minerals and rock types, superficial deposits, interpretation of geologic maps, structural geology, geologic exploration, ground water cycle, geology of Egypt and greater Cairo.

403 Design of Steel Structures (3 cr.)

Prerequisite: CENG 303. Offered in fall and spring.

Concepts of elastic design of steel structures, type of loading, structural systems for

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buildings and bridges, elastic design and analysis of structural members, tension members, compression members, beams, columns, and connections.

411 Soil Mechanics (4 cr.)

Prerequisites: ENGR 229 and CENG 311. Offered in fall and spring.

Index properties and engineering classification, composition and structure of soils; water flow in soil media; stresses in soil, stress-strain properties of soils; shear strength, and consolidation. Experimental measurements. Lab and field compaction. Fundamental problems of slope stability; methods of stability analysis. Three class periods and one three-hour lab period.

420 Design of Interior Spaces (3 cr.)

Prerequisite: CENG 215. Offered in spring.

Historical background. Concepts and principles of interior design. Space planning and design. Human perception. Color and lighting. Materials selection. Function, material and construction of furniture and textiles. Design for the disabled. Ergonomics and design. Design drawing and detailing.

421 Architectural Design (3 cr.)

Prerequisite: CENG 321 and approval of instructor. Offered in fall.

Concepts and principles of architectural design. Approaches to architectural design. Spatial and Functional design. Post occupancy evaluation of buildings. Design of residential and simple recreational, institutional or commercial buildings.

423 Methods and Equipment for Construction I (3 cr.)

Prerequisite: CENG 304 and 321. Offered in fall and spring.

Site management. Techniques of building construction; methods, materials, tools and equipment; traditional, mechanized and prefabrication construction systems. Construction detailing. Selection, sizing, matching and operation of construction equipment. Two class periods and one three-hour field period.

424 Methods and Equipment for Construction II (2 cr.)

Prerequisite: CENG 423. Offered in fall and spring.

Civil construction; methods, materials, tools and equipment; traditional and modern construction technologies. Evaluation and selection of appropriate construction technology. Value engineering. Sizing, operation and maintenance of construction equipment.

426 Steel and Concrete Bridges (3 cr.)

Prerequisites: CENG 304 and 403. Offered occasionally.

Types of bridges. Loads; dead, live, impact, wind and other loading. Basic design and construction of various types of bridges; truss, beam and plate girder, slab, box girder. Bearings and expansion details.

427 Prefabricated, Water and Prestressed Concrete Structures (3 cr.)

Prerequisite: CENG 304. Offered occasionally.

Prefabricated concrete; design methods, tolerance, floor and roof systems, wall panels and construction joints. Concrete water structures; design considerations and parameters, water tightness, construction of circular and rectangular tanks. Prestressed concrete; basic principles, methods and systems of prestressing, partial loss of prestressing, analysis and design for flexural, shear, bond and bearing.

428 Building Finishes (3 cr.)

Prerequisites: CENG 321, 423. Offered in fall.

Construction details, materials selection, and methods of construction of building finishes: floors, walls, ceiling; stairs, openings, installations, speciality works. Design/detailing project.

431 Transportation Engineering (3 cr.)

Prerequisites: ENGR 214 and CENG 323. Offered in fall and spring.

Introduction to transportation planning and engineering; transportation planning tools, concepts of geometric and structural design and construction of highways, and concepts of geometric design of railways.

432 Design of Irrigation Systems (3 cr.)

Prerequisite: CENG 311. Offered occasionally.

Irrigation project planning, irrigation water requirements, conveyance systems, traditional and modern irrigation systems (surface, sprinkle and trickle), drainage systems, irrigation and drainage structures.

441 Introduction to Construction Management and Cost Estimating (3 cr.)

Prerequisites: ENGR 345, BADM 307. Offered in fall and spring.

Introduction to construction management: participants involved, types of construction, project life cycle, contractual relationships and responsibilities, International contracts and managerial functions. Estimating techniques and procedures: approximate estimating, quantity surveying, detailed estimating procedure, costing of labor, material, equipment, overhead costs, financing costs, cost recording and cost accounts.

442 Construction Project Specifications, Bids, and Contracts (3 cr.)

Prerequisite: CENG 441. Offered in fall and spring.

Contract definition, formation principles of a contract, performance or breach of contract obligations, termination of agreements, types of construction contracts and legal implications, specifications, legal organizational structures (agency, proprietorship, partnership, corporation).

446 Techniques of Planning, Scheduling and Control (3 cr.)

Prerequisite: CENG 441. Offered in fall and spring.

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Project definition and work breakdown structure, scheduling and control models and techniques. Resource allocation and leveling, optimal schedules, documentation and reporting, time and cost control, progress monitoring and evaluation. Computer applications.

448 Financial Management and Accounting for Construction (3 cr.)

Prerequisites: CENG 442. Offered in fall and spring.

Basic accounting terminology, accounting cycle and process, financial statements and analysis, unique aspects of accounting for the construction industry methods of revenue recognition for construction, percentage of completion computations, unbalanced items in construction: costs in excess and billings in excess.

449 Systems Analysis for Construction Engineering (3 cr.)

Prerequisites: ENGR 312, CENG 446. Offered occasionally.

Introduction to the basic construction systems. The systems analysis approach; multi-objective problems. Decision analysis; decision making under uncertainty, risk aversion, utility function. Economic considerations for resource allocation; minimum cost model, maximum output model. Sensitivity analysis; changes in unit costs, changes in resource constraints. Information management systems.

452 Structural Systems and Advanced Design (3 cr.)

Prerequisites: CENG 304, 403. Offered in spring.

Structural design process, structural performance criteria, choice of structural system, design topics for reinforced concrete and steel structures including: rigid frames, ribbed and flat floor systems, torsion, biaxial bending, deflections, composite construction.

461 Design and Construction of Foundations and Retaining Structures (3 cr.)

Prerequisite: CENG 411. Offered in fall and spring.

Earth pressure theories; bases for design of retaining structures; types of foundations systems and design criteria; design of shallow foundations and deep foundations; construction methods; effects of construction of nearby structures.

462 Applications in Geotechnical Engineering (3 cr.)

Prerequisite: CENG 461 or concurrent. Offered occasionally.

Geotechnical analysis and design concepts applied to engineering projects: stability of natural and man-made soil and rock slopes, reinforced earth, deep soil stabilization, cofferdams, mat foundation, deep foundation under various loading conditions.

471 Environmental and Sanitary Engineering (3 cr.)

Prerequisite: CENG 311. Offered in fall and spring.

Water quality. Material balance relationships and water pollution control. Water demand. Drinking water: collection, treatment, distribution and quality assurance. Domestic and industrial wastewater collection, treatment and disposal. Air-quality and air-pollution control.

480 Special Problems in Construction Engineering (1-3 cr.)

Prerequisite: consent of instructor and department chair on the basis of a well-defined proposal. Offered in fall and spring.

Independent study in various problem areas of construction may be assigned to individual students or groups. Readings assigned and frequent consultations held. May be repeated for credit if content changes.

481 Highway Facilities (3 cr.)

Prerequisite: CENG 431. Offered occasionally.

Analysis of factors in developing highway transportation facilities, traffic estimates and assignment, problems of highway geometric and design standards, planning and location principles, intersection design factors, structural design of pavement and highway maintenance.

490 Senior Project I (1 cr.)

Prerequisite: completion of 78 credits in major. Offered in fall and spring.

A capstone project. Topics are selected by groups of students according to their area of interest upon advisors' approval. Projects address solutions to open ended applications using an integrated engineering approach.

491 Senior Project II (2 cr.)

Prerequisite: CENG 490. Offered in fall and spring.

An applied cap stone project. Continuation of senior project I topics is encouraged. Actual construction projects are selected by groups of students upon advisors' approval for analysis. The management and technology aspects of construction are simulated and investigated.

494 Selected Topics in Construction Engineering (3 cr.)

Prerequisite: senior standing. Offered in fall and spring.

Specialized topics in construction engineering will be selected and presented.

497 Practical Training (1 cr.)

Prerequisite: completion of 96 credit hours. Offered in fall.

Each student is required to spend a minimum of eight weeks in industrial training in Egypt or abroad. A complete account of the experience is reported, presented and evaluated. Professional ethics are discussed.

Coptic Studies

Minor - See Egyptology

DEVELOPMENT STUDIES

Department of Sociology, Anthropology, Psychology and Egyptology
School of Humanities and Social Sciences

Advisor: M. Abdelrahman (Sociology)

The purpose of the development studies minor is to offer students an introduction to the various social, political, economic, and cultural factors related to the process of development. The approach is interdisciplinary and comparative, with primary emphasis upon development-related issues.

Academic advising is provided through the Anthropology and Sociology units of the Department of Sociology, Anthropology, Psychology, and Egyptology on behalf of an interdisciplinary group of faculty.

Minor

Requirements (15 credits): from the following lists of approved courses, three "development courses" from at least two disciplines other than the major, one "area studies course" not included in the major, and the Development Studies Seminar to be taken after or concurrent with the completion of other courses in the minor:

Approved Development Courses:

POLS/ANTH/ECON/ SOC		
	460	Development Studies Seminar, 3 cr.
POLS/SOC	304	Bureaucracy and Development, 3 cr.
POLS	310	Introduction to Development, 3 cr.
	323	Comparative Government and Politics: Developing Systems, 3 cr.
ECON	224	Economic History, 3 cr.
	310	Public Finance, 3 cr.
	312	Economic Development, 3 cr.
SOC/ANTH	303	Social Movements, 3 cr.
	321	Urban Society in Transition, 3 cr.
	450	Third World Development, 3 cr.
SOC	322	Rural Sociology, 3 cr.
	323	Fundamentals of Population Studies, 3 cr.
	431	Political Sociology, 3 cr.
ANTH	320	Peasant Societies, 3 cr.
	360	Gender, Society, and Social Change, 3 cr.
	372	Applied Anthropology, 3 cr.
	462	Economic Anthropology, 3 cr.

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ANTH	492	Political Anthropology, 3 cr.
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Approved Area-Studies Courses:

POLS	308	Comparative Politics of the Middle East, 3 cr.
	324	Comparative Government and Politics in Contemporary Eastern Europe and Russia, 3 cr.
	354	Political and Social Thought in the Modern Arab World, 3 cr.
	420	Issues in Middle East Politics, 3 cr.
	439	Government and Politics in the Modern Caucasus and Central Asia, 3 cr.
ECON	239	Economic History of the Modern Middle East, 3 cr.
	414	Economics of Egypt, 3 cr.
	415	Economic Development in the Middle East, 3 cr.
ANTH	312	Cultures of the Middle East and North Africa, 3 cr.
	382	Cultures of Sub-Saharan Africa, 3 cr.
	384	Cultures of Latin America, 3 cr.
	386	Cultures of Asia, 3 cr.
SOC	203	Social Problems of the Middle East, 3 cr.
POLS/HIST	206	Global Politics in the Twentieth Century, 3 cr.
HIST	410	Modern European Imperialism, 3 cr.

Selected special topics courses may be accepted as part of "development courses" or "area-studies courses" by the approval of the Advisor:

POLS	402	Seminar: Special Topics in Development
ECON	412	Seminar: Special Topics in Development Economics
SOC/ANTH	400	Seminar: Topics on Development Issues

See appropriate departments for course descriptions.

ECONOMICS

Department of Economics
School of Business, Economics and Communication

Professors: T. Abdel Malek, G. Amin, A. Beshai, A. El Mawaziny, W. Mikhail, H. Thompson

Associate Professors: A. Ezz El Arab, M. George, N. Rizk (Chair)

Assistant Professors: M. Abdel Baki, S. Al Azzawi, H. El-Ramly, A. Kamaly, E. Khalil, I. Ruble, M. Said, J. Salevurakis, R. Seda, T. Selim

A society's scarce resources are allocated among various production activities and among various consumers. An economy is made up of business producing goods and services for sale, individuals working, receiving income, and spending that income on the goods and services, and government taxing businesses and individuals and providing services not available from the private sector. The methods in which this complex system is organized and coordinated through a series of interrelated markets is the subject of economics. The basic training in these methods is provided in concentration requirements covering economic theory, statistics, econometrics, finance, development, trade, and economic history.

Bachelor of Arts

The content of the curriculum for the B.A. degree in Economics offers a comprehensive coverage of subjects. The program is designed to prepare students as i) citizens with future influence by virtue of a university degree; ii) future holders of jobs which require training in economics; and iii) future postgraduate students of economics. For the first group, the curriculum offers training in rational thought and the connections between theory and main features of policy. For the second group, the curriculum offers the standard tools of economic analysis and an appreciation of the interdependence of world economies. For the third group, the curriculum, by virtue of its content of research methods and statistics, and econometrics offers entry into M.A. and Ph.D. programs. A holder of the B.A. in Economics from AUC can participate in advanced training on equal basis with undergraduates from major American and British Universities.

A student who intends to major in Economics must complete the following:

- Earn an average of "B" in ECON 201 and 202
- Earn a minimum "B" grade in ECON 216

Notwithstanding these requirements, a subcommittee of the department might in exceptional cases, and on a case-by-case basis decide on admission of students looking in their overall record.

A total of 120 credits is required for the bachelor's degree in economics:

Core Curriculum (34-46 credits)

Concentration Requirements (51 credits)

ECON	201	Introduction to Macroeconomics, 3 cr.
	202	Introduction to Microeconomics, 3 cr.
	216	Mathematics for Economists I, 3 cr.
	218	Statistics for Economists, 3 cr.
	301	Intermediate Macroeconomic Theory, 3 cr.
	302	Intermediate Microeconomic Theory, 3 cr.
	316	Mathematics for Economists II, 3 cr.
	318	Introduction to Econometrics, 3 cr.
	403	International Trade, 3 cr.
MATH	112	Statistical Reasoning, 3 cr.

Plus at least **two** of the following:

ECON	312	Economic Development, 3 cr.
	405	History of Economic Thought, 3 cr.
	414	Economics of Egypt, 3 cr.

Plus **Five** other courses in economics

Students who plan to pursue graduate studies in economics are strongly advised to take ECON 418 and ECON 425, since these are prerequisites for the master's program.

Collateral Requirements (9 credits)

ACCT	211	Financial Accounting, 3 cr.
FINC	303	Business Finance I, 3 cr.
CSCI	102	Introduction to Computers and their Applications, 3 cr.

Electives (14-26 credits)

Depending on the number of credit hours needed to complete the 120 stated above.

Minor

The minor in field of study provides students with an introduction to the fundamental historical, descriptive, and theoretical concepts of the field.

Requirements (15 credits): ECON 201, 202, and **three** other economics courses, with a minimum of two 300-level courses or above. Not included in the minor are ECON 216, 218, 316, 318. With the approval of the instructor and the unit head, students may substitute other economics courses for credit towards the minor.

Economics Courses (ECON)

201 Introduction to Macroeconomics (3 cr.)

Offered in fall and spring.

Fundamental economic concepts and methods of economic analysis with emphasis on

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macroeconomic issues. Analyzes aggregate economic activity in relation to the level, stability and growth of national income. Topics analyzed include the determination and effects of national income, consumption, investment, unemployment, inflation, interest rates, and how these may be influenced by monetary, fiscal and other policies.

202 Introduction to Microeconomics (3 cr.)

Offered in fall and spring.

Fundamental economic concepts and methods of economic analysis with emphasis on microeconomic issues. Major topics include price determination, theory of the firm, market structure, resource allocation, and social welfare implications.

216 Mathematics for Economists I (3 cr.)

Prerequisite: Thanawiya 'Amma Science or MATH 100. Offered in fall and spring.

Continuity and limits, rate of change of economic variables, differentiation, maxima and minima and points of inflexion for a single variable, integration, logarithmic and exponential functions & Taylor's theorem. Applications to economic theory.

218 Statistics for Economists (3 cr.)

Prerequisite: MATH 112. Offered in fall and spring.

The course covers the general theory of estimation. Topics include: sampling distributions, testing hypotheses about the difference between two means, analysis of variance (ANOVA), correlation and simple regression analysis, nonparametric statistics including Chi-squared & Index numbers.

224 Economic History (3 cr.)

Offered occasionally.

Theories of economic evolution with a special focus on Europe. Includes analyses of technological change, property rights systems and economic growth, and income distribution. Examines the transition from feudalism to capitalism, first and second industrial revolutions, the 20th century Great Depression and the reconstruction of the world economies after World War II.

239 Economic History of the Modern Middle East (3 cr.)

Offered in fall and spring.

Historical survey of the economic conditions, systems, and institutions of the Middle East with special emphasis on the period 1800-1945.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

301 Intermediate Macroeconomic Theory (3 cr.)

Prerequisites: ECON 201, ECON 216. Offered in fall and spring.

This course covers aggregate economic behavior using Keynesian and Neoclassical macroeconomic analysis. Various theories of how a nation's income, employment and price level behave under static and dynamic conditions are examined. Topics covered include: income determination, unemployment, price stability, budget deficits, balance of payments equilibrium and economic growth, in addition to the impact of fiscal, monetary and exchange rate policy on macroeconomic performance.

302 Intermediate Microeconomic Theory (3 cr.)

Prerequisites: ECON 201, ECON 202, ECON 316. Upon the approval of the instructor, a student may take ECON 316 concurrently. Offered in fall and spring.

Consumer behavior, cost behavior, and production functions, theory of market relationships, welfare economics and general equilibrium theory.

303 Money and Banking (3 cr.)

Prerequisite: ECON 201, 202. Offered in fall and spring.

Determinants of a nation's money supply and the role of the central bank. Monetary theory, impact of changes in the stock of money on economic activity, international monetary relations, examination of different international monetary systems.

308 Labor Economics (3 cr.)

Prerequisite: ECON 201 and 202. Credit: 3 hrs. Offered occasionally.

The course offers a general treatment of modern theoretical and empirical labor economics. Topics to be covered include: operations of labor markets; wage determination; firm, industry and public sector labor demand; human capital investment; race and gender employment and wage discrimination; public policy effects. The relation of labor market outcomes and attendant public policy to poverty, income distribution and economic growth is covered.

309 Comparative Economic Systems (3 cr.)

Prerequisite: ECON 201. Offered occasionally.

Critical analysis of the main features of capitalism, socialism, and communism emphasizing historical evolution, current theories and trends and practical implications.

310 Public Finance (3 cr.)

Prerequisite: ECON 201. Offered occasionally.

Application of efficiency criteria to political decision making; allocation of resources to social goods, tax and subsidy correctives for externalities, minimizing excess burden of financing government activity. Equity criteria for tax systems and income distribution. Analysis of Egypt's public finances and evaluation of Egyptian public policy.

312 Economic Development (3 cr.)

Prerequisites: ECON 201, 202. Offered in fall and spring.

Major economic problems of developing countries. Alternative explanations of underdevelopment and theories of development. Major domestic and international

aspects of development including population growth, capital accumulation and international economic relations. Sustainable development.

316 Mathematics for Economists II (3 cr.)

Prerequisite: ECON 216. Offered in fall and spring.

Matrix algebra, Determinant and Rank of a matrix, special types of matrices, Input-Output analysis. Functions of several variables. Partial differentiation, maxima and minima with and without constraints, homogeneous functions, difference equations, differential equations of the first order and first degree. Applications to economic theory.

318 Introduction to Econometrics (3 cr.)

Prerequisite: ECON 218 and 316. Offered in fall and spring.

The course covers the General Linear Regression Model. Topics include: departures from the basic assumptions of the general model: multicollinearity, autocorrelation, heteroskedasticity, errors in variables, dynamic systems and distributed lag models, the identification problem, estimation of structural equations. Assignments include applications to real world examples.

320 The Digital Economy: Information Technology and Economics (3 cr.)

Prerequisite: ECON 201, 202 and 301. Offered in fall and spring.

The course offers an analysis of issues related to the 'New Economy', defined as an economy displaying higher rates of growth and productivity brought about by information and communication technologies (ICTs). Topics include the role of ICTs in productivity revival, the impact of electronic commerce on transactions costs, and the challenges offered to developing countries in the digital age. Students will be involved in current worldwide debates on such issues, including the question of whether the digital revolution calls for a shift in the paradigm in the study of economics.

348 Introduction to Agricultural Economics (3 cr.)

Prerequisites: ECON 201 and 202. Offered in fall and spring.

This course is concerned with application of the basic concepts of economic theory to agriculture with special reference to developing countries. Resource structure and market structure in the agricultural sector are analyzed and thoroughly explained. Characteristics and performance of Egyptian agriculture are reviewed and evaluated. Agricultural reform policy of Egypt is discussed.

403 International Trade (3 cr.)

Prerequisites: ECON 301 and 302. Offered in fall and spring.

International Trade Theory: Mercantilist Theory, comparative costs, and post-Ricardian theories including economies of scale and imperfect competition. Protection Theory; Effective Protection. Terms of trade, national income and the balance of payments. Fluctuations in trade. Foreign exchange markets, exchange rates and adjustment in the balance of payments. International resource movements.

405 History of Economic Thought (3 cr.)

Prerequisites: ECON 201 and 202. Offered in fall and spring.

This course investigates the historical evolution of economic theory by examining the

development of Mercantilism, Physiocracy, Classical, Marxian, Neoclassical theory, Austrian-Keynesian and post-Keynesian economics.

411 Seminar: Special Topics in Economics (3 cr.)

Offered occasionally.

Guided reading, research, and discussion of specific topics chosen by the instructor in theoretical policy or applied economics. May be taken for credit more than once if content changes.

412 Selected Topics in Development Economics (3 cr.)

Prerequisite: ECON 312. Offered occasionally.

A single subject relevant to economic development is studied in depth. The subject in any one semester may be defined by geography (e.g. sub-Saharan Africa), by body of theory (e.g. urban economics), or by policy issue (e.g. environmental protection).

413 Economic Planning and Project Evaluation (3 cr.)

Prerequisites: ECON 301 and 302. Offered in fall and spring.

Designed to discuss the theoretical framework of economic planning and project evaluation: Techniques of economic planning at both macro and micro levels are investigated. This include national accounts, input-output analysis, and cost-benefit analysis. Case studies are also considered.

414 Economics of Egypt (3 cr.)

Prerequisite: ECON 312. Offered in fall and spring.

An analysis and assessment of the performance of the economy of modern Egypt with emphasis on its development since the 1952 revolution and up till the introduction of the structural adjustment program. This includes a detailed discussion of the major problems facing agricultural and industrial development.

415 Economic Development in the Middle East (3 cr.)

Prerequisite: ECON 312. Offered occasionally.

Theory of economic development and underdevelopment applied to economic problems facing the Arab countries. The nature of the economic processes in these countries.

418 Econometric Methods (3 cr.)

Prerequisites: ECON 316 and 318. Offered in fall and spring.

Extensions of the classical linear model. Instrumental variables. Errors in variables. Maximum likelihood estimation. Simultaneous equation systems. Vector autoregressions, error correction models, nonstationarity and cointegration.

418P Practicum (1 cr.)

Offered in fall and spring.

This practicum is structured to run parallel with ECON 418. Practical problems in economic model building. Formulation of static and dynamic models. Estimation of behavioral equations of illustrative and real models using econometric packages such as RATS, TSP, SORITEC, etc., with single-equation and simultaneous-equation

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methods. Testing hypotheses about economic theory. Calculation of forecasts.

420 Independent Study (3 cr.)

No student may take this course more than once. Prerequisites: consent of instructor and unit head, senior standing. Offered in fall and spring.

Guided reading, research, and discussion based on a subject of mutual interest to a student and faculty member. May be taken for graduate credit upon the approval of the Director of Graduate Studies and the Department Chair.

425 Mathematical Economics (3 cr.)

Prerequisite: ECON 316. Offered in alternate years.

Complex numbers, mathematical programming, differential equations, characteristic roots and quadratic forms, linear programming, difference equations.

460 Development Studies Seminar (3 cr.)

Same as ANTH/POLS/SOC 460. Prerequisite: 12 hours of social science courses. Offered occasionally.

Interdisciplinary and comparative analysis of development as a process and as a historical phenomenon. Critical evaluation of economic, political, social, and cultural technological and managerial factors that structure developmental change.



Main Library, Greek Campus

EGYPTOLOGY

Department of Sociology, Anthropology, Psychology and Egyptology
School of Humanities and Social Sciences

Professors: F. Haikal, K. Weeks

Associate Professor: S. Ikram

Egyptology is the scientific study of the history and culture of Ancient Egypt, from the earliest times to the Arab conquest, a time span covering some 4,600 years. Egyptology covers all aspects of Ancient Egyptian civilization, from language and religion to art, architecture and social structure.

Bachelor of Arts in Egyptology

The Program aims at preparing students for careers in the science of Egyptology and on the preservation and management of Egypt's material heritage. Research, writing and presentation skills are also stressed. Students will:

- 1- Acquire knowledge, appreciation and understanding of Ancient Egypt's cultural heritage and its legacy in the world.
- 2- Acquire mastery of the research tools upon which a career in Egyptology must depend, including Ancient Egyptian language and scripts as well as skill in excavation site analysis.
- 3- Prepare properly to assume the responsibility of caring for, maintaining and preserving Ancient Egypt's unique cultural heritage.

A student who wishes to declare a major in Egyptology should be registered in or have taken an Egyptology course.

A total of 120 credits is required for the bachelor's degree in Egyptology:

Core Curriculum (34 - 46 credits)

Concentration Requirements (48 credits)

All **Twelve** of the following (36 credits):

EGPT/HIST	243	History I: Pre-Dynastic Through Middle Kingdom Egypt, 3 cr.
	244	History II: Middle Kingdom Through New Kingdom Egypt, 3 cr.
	250	Ancient Egyptian Literature in Translation, 3 cr.
	253	Hieroglyphics I, 3 cr.

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EGPT/HIST	254	Hieroglyphics II, 3 cr.
EGPT	261	Art and Architecture of Ancient Egypt I, 3 cr.
	262	Art and Architecture of Ancient Egypt II, 3 cr.
EGPT/ANTH	304	Culture and Society of Ancient Egypt, 3 cr.
EGPT/HIST	346	Societies and Cultures of the Ancient Near East, 3 cr.
EGPT	353	Hieroglyphics III, 3 cr.
	402	Hieroglyphics IV, 3 cr.
	440	Ancient Egyptian Religion and Ethics, 3 cr.

From among the following (12 credits):

Students intending to pursue graduate studies in Egyptology must take EGPT 401 (Introduction to Hieratic) and 400 (Introduction to Coptic).

EGPT	202	Ancient Egypt, 3 cr.
	204	Archaeology: Methods and Theories, 3 cr.
	301	Cultural Geography of Ancient Egypt, 3 cr.
	341	Egypt in the Late Period, 3 cr.
EGPT/HIST	342	History of Egypt in the Graeco-Roman Era, 3 cr.
EGPT	348	Societies and Cultures of Ancient Nubia, 3 cr.
	400	Introduction to Coptic, 3 cr.
	401	Introduction to Hieratic, 3 cr.
	403	Independent Study in Egyptology, 1-3 cr.
	459	Selected Topics in Cultural Resource Management and Museology, 3 cr.
	491	Field Work in Egyptological Method and Theory, 3 cr.
	499	Selected Topics in Egyptology, 3 cr. (can be taken repeatedly as topics change)
	445	Selected Topics in Coptic Studies (can be taken repeatedly as topics change)

Collateral Requirements (21 credits)

ANTH 202 Cultural Anthropology, 3 cr.

Including 18 hours in related disciplines, such as anthropology, history/art, Islamic art and archaeology, linguistics, or science, possibly to constitute a minor.

*General Electives/Minor (5 - 17 credits)***

*** Depending on the number of credit hours needed to complete the 120 stated above.*

Minor in Egyptology

Egyptology is the science and study of Ancient Egypt, including the different aspects of its material and nonmaterial culture. The minor in Egyptology is designed to provide students with a substantive introduction to Ancient Egyptian civilization through the study of its history, art and architecture, religion and literature.

*Requirements (15 credits):***All three** of the following:

EGPT/HIST	243	History I: Pre-Dynastic Through Middle Kingdom Egypt, 3 cr.
EGPT/HIST	244	History II: Middle Kingdom Through New Kingdom Egypt, 3 cr.
EGPT/ANTH	304	Culture and Society of Ancient Egypt, 3 cr.

and **two** from among the following (6 credits):

EGPT	250	Ancient Egyptian Literature in Translation, 3 cr.
	253	Hieroglyphics I, 3 cr.
	254	Hieroglyphics II, 3 cr.
EGPT	261	Art and Architecture of Ancient Egypt I, 3 cr.
EGPT	262	Art and Architecture of Ancient Egypt II, 3 cr.
EGPT	440	Ancient Egyptian Religion and Ethics, 3 cr.

Minor in Coptic Studies

The minor in Coptic Studies provides students with an introduction to the Coptic period as it follows on from the Pharaonic period and into the Islamic period. This interdisciplinary program, drawing primarily from the Egyptology and Arabic Studies, will cover religion, art, literature, & social and political history from the early days until the present. Influences between different groups, as manifested culturally, will also be studied. Although the main offerings for this minor are currently based in Egyptology and Arabic Studies, other offerings from Political Science, Religion, Art History, History, etc. can also be included, where appropriate.

The minor is supervised by the head of the Egyptology Unit in the SAPE Department.

Requirements (15 credits):

EGPT	400	Introduction to Coptic, 3 cr.
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Any two of the following:

EGPT	342	History of Egypt in the Graeco-Roman , 3 cr.
	445	Selected Topics in Coptic Studies, 3 cr. (may be taken twice, depending on the subject matter)

Any two of the following:

ARBS	324	Non-Muslim Communities in the Muslim World, 3cr.
	344	Arab-Islamic Civilization in the Middle Period, 945-1380 A.D., 3 cr.
	370	Pre-Islamic Influences on Islamic Art and Architecture, 3 cr.

Appropriate courses from other departments may be substituted.

Egyptology Courses (EGPT)

202 Ancient Egypt (3 cr.)

Offered each semester.

An introduction to history, society, religion, art and architecture of Ancient Egypt, including description of the nature and character of the field of Egyptology. The continuing impact of Ancient Egypt on subsequent societies and cultures including that of modern Egypt will be examined.

204 Archaeology: Methods and Theories (3 cr.)

Offered occasionally.

The methods and theories of archaeological excavation and interpretation; archaeological evidence of human cultural development; archaeology as a social science. Special emphasis on the development of Neolithic cultures in Egypt and the origins of Early Dynastic Egyptian culture in its Near Eastern setting.

243 History I: Dynastic Through Middle Kingdom Egypt (3 cr.)

Same as HIST 243. Offered in fall.

The history of Pharaonic Egypt from predynastic times to the end of the Middle Kingdom will be covered. Literary sources will be augmented by archaeological evidence. Field trips to archaeological sites in the Cairo area are an obligatory aspect of the course.

244 History II: Middle Kingdom Through New Kingdom Egypt (3 cr.)

Same as HIST 244. Prerequisite: EGPT/HIST 243 or consent of instructor. Offered in spring.

The course will focus on the history of Pharaonic Egypt from the Middle Kingdom to the decline of the New Kingdom and will examine the texts, monuments and artifacts that underline our understanding of this era. Field trips to Cairo Museum and other relevant sites are a required part of the course.

250 Ancient Egyptian Literature in Translation (3 cr.)

Offered occasionally.

The course will analyze Ancient Egyptian literary texts -including folk tales, myths, wisdom literature and poetry- in order to present Ancient Egyptian culture through its literature.

253 Hieroglyphics I (3 cr.)

Offered in fall.

The course introduces the student to the study of classical Egyptian script, grammar and hieroglyphic texts of the Middle Kingdom.

254 Hieroglyphics II (3 cr.)

Prerequisite: EGPT 253. Offered in spring.

The course is a continuation of EGPT 253. Students will concentrate on the verbal forms of classical Egyptian.

261 Art and Architecture of Ancient Egypt I (3 cr.)

Offered in fall.

The course will identify the basic principles of Egyptian art and architecture and survey the major works and styles from predynastic times to the end of the Middle Kingdom. Field trips to principal sites and extensive use of the Egyptian Museum's collections are required.

262 Art and Architecture of Ancient Egypt II (3 cr.)

Offered in spring.

The course will identify the basic characteristics of Egyptian art and architecture from the end of the Middle Kingdom to the end of dynastic times. Special emphasis will be given to the New Kingdom art and architecture of Thebes. Extensive use of the Egyptian Museum's collections is required, and field trips to principal sites are obligatory -including a possible field trip to Luxor.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

301 A Cultural Geography of Ancient Egypt (3 cr.)

Prerequisite: instructor's consent. Offered occasionally.

The class examines Egypt's geography and devotes special attention to the effect of geography upon the development of Ancient Egyptian history and civilization. Egypt's geography past and present will be compared, and the exploitation of Egypt's natural resources will be investigated.

304 Culture and Society of Ancient Egypt (3 cr.)

Prerequisite: either EGPT/HIST 243, 244, EGPT 261 or 262. Offered occasionally.

The course identifies the basic structure of ancient Egyptian society and culture, and places special emphasis upon the interaction of economics, social organization, environment, law, politics, and religion.

341 Egypt in the Late Period (3 cr.)

Prerequisite: EGPT/HIST 243 and 244, or instructor's consent. Offered occasionally.

The course will examine the factors that lay behind the collapse of the New Kingdom state and the rise of the Libyan and Nubian dynasties that dominated Egypt from 1200 to 332 BC. Special attention will be devoted to the last dynasties of the Pharaonic tradition, Dynasties XXI-XXX.

342 History of Egypt in the Graeco-Roman Era (3 cr.)

Same as HIST 342. Prerequisite: EGPT/HIST 243 and 244, or instructor's consent. Offered occasionally.

The course will study the history of Egypt in the Graeco-Roman period and the momentous confrontation between Greek and Egyptian culture between 300 BC and

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700 AD. It will also examine the social consequences of the spread of Christianity in Egypt and the rise of Coptic culture.

346 Societies and Culture of the Ancient Near East (3 cr.)

Same as HIST 346. Prerequisite: EGPT/HIST 243 and 244, or instructor's consent. Offered occasionally.

The course constitutes a historical overview of the societies and cultures of Egypt, the Mediterranean world and the Middle East, from the emergence of urban society in Iraq in the fourth millennium BC to the rise and fall of the great empires of Babylon, Assyria, the Hittites, Achaemenid Persia, Greece and Rome. Special attention will be paid to the position of Ancient Egyptian civilization within the wider context of Ancient Near Eastern history.

348 Societies and Cultures of Ancient Nubia (3 cr.)

Prerequisite: consent of instructor. Offered occasionally.

The course will survey the emergence of food-producing societies in Nubia and the Sudan from 6000 BC, and will examine the development of Nubian civilization from the Kerma culture and the kingdoms of Kush and Meröe to the advent of Islam. Special attention will be devoted to the interaction between Egyptian and Nubian civilizations.

353 Hieroglyphics III (3 cr.)

Prerequisite: EGPT 254. Offered every fall.

Students will read a number of Egyptian texts and learn how to translate and interpret written documents.

400 Introduction to Coptic (3 cr.)

Prerequisite: EGPT 254. Offered occasionally.

Coptic represents the last stage of the ancient Egyptian language. The course will include reading of selected texts in two Coptic dialects.

401 Introduction to Hieratic (3 cr.)

Prerequisite: EGPT 254. Offered occasionally.

Hieratic is a script derived from hieroglyphics used mainly on papyrus. The course is a study of this script through reading selected texts related -literary, religious, or administrative- related to daily life in ancient Egypt .

402 Hieroglyphics IV (3 cr.)

Prerequisite: EGPT 353. Offered in spring.

The course consists of further reading of Egyptian texts with an introduction to the new Egyptian language of the later periods of Pharaonic history. In order to introduce students to epigraphy, they are required to copy and study texts from Cairo Museum.

403 Independent Study in Egyptology (1-3 cr.)

Offered every semester.

Independent research projects in Egyptology, with consent of instructor and student's adviser.

440 Ancient Egyptian Religion and Ethics (3 cr.)

Prerequisite: instructor's permission. Offered occasionally.

The course will examine in detail the beliefs and religious institutions of the Ancient Egyptians. Special attention will be devoted to official and popular religions, and to their manifestation in architecture as well as in the literature of Ancient Egypt.

445 Selected Topics in Coptic Studies (3 cr.)

Same as ARBS, ANTH, HIST, SOC 445. Offered in fall.

This course allows instructors to offer a topic in Coptic Studies. The topic will be chosen from year to year in coordination with the departments concerned and the dean of the School of HUSS, and according to the individual interests and areas of expertise of the instructors. Topics chosen may include various aspects of Coptic art and history, monasticism, folklore, or other subjects. The course may be taken more than once if the topic changes. Students in these majors may petition preferably before registration to have the course included in their major requirements.

459 Selected Topics in Cultural Resource Management and Museology (3 cr.)

Prerequisite: consent of instructor. Offered occasionally.

The course deals with different types of cultural heritage present in Egypt and their physical and cultural environment, and with the various methods of managing them in order to ensure their proper preservation while making them accessible to tourists and scholars. At the instructor's discretion, the course may also provide an understanding of the role of museums in the modern world and the basic methodology and practice of museum management.

491 Field Work in Egyptological Method and Theory (3 cr.)

Prerequisite: Permission of instructor. Preference will be given to majors in Egyptology, anthropology, archaeology. Inquiries concerning the course must be made no fewer than seven months prior to the start of the summer semester. Summer semester.

Participation in archaeological and/or epigraphic fieldwork in Egypt. Sites and projects will vary.

499 Selected Topics in Egyptology (3 cr.)

Prerequisites: junior standing and/or consent of instructor. Offered occasionally. May be repeated for credit when content changes.

ELECTRONICS

Department of Physics
School of Sciences and Engineering (SSE)

Professors: F. Assabghy (Dean of SSE), M. Ghannam

Associate Professors: S. Sedky, A. Shaarawi

Minor

The aim of the minor in electronics is to provide students majoring in chemistry, mechanical engineering, computer science, and mathematics with a working knowledge of electronics. The hands-on laboratory instruction emphasized in the minor enables scientists and engineers to optimize their use of electronic equipment.

Requirements 17 credit hours of electronics minor should cover:

PHYS 215	Introduction to Circuit Analysis and Devices, 3 cr.
221L	Electronics Laboratory I, 2 cr.
309L	Digital Logic Design Laboratory, 1cr.
319	Digital Logic Design, 3 cr.

and a minimum of **8 credits** selected from the following:

PHYS 305L	Modern Sensors Laboratory, 1 cr.
307L	Electronics Laboratory II, 1 cr.
315	Modern Sensors, 3 cr.
318	Instrumentation Systems and Control, 3 cr.
323L	Semiconductor Technology Lab, 2 cr.
327	Operational Amplifiers and Applications, 3 cr.
404L	Photonics and Optical Communication Lab, 1 cr.
407L	Process Instrumentation and Digital Control Lab, 1 cr.
409L	Computerized Instrumentation Lab, 1 cr.
414	Photonics, 3 cr.
415	Selected Topics, 3 cr.
417	Process Instrumentation, 3 cr.
429	Computerized Instrumentation, 3 cr.
EENG 321	Automatic Control, 3 cr.
413	Testing Digital Circuits, 3 cr.
CSCI 330	Computer Architecture, 3 cr.
339L	Computer Architecture Laboratory, 1 cr.

See course descriptions under "Physics".

ELECTRONICS ENGINEERING

Department of Electronics Engineering
School of Sciences and Engineering

Associate Professor: H. Amer (Chair), S. Abdel Azeem

Assistant Professor: A. Elezabi

Distinguished Lecturer: H. Elabd

Since the discovery of the electron in 1897, and the invention of the transistor in 1947, Electronics Engineering has continued to experience tremendous growth that has greatly impacted our lives. The present “information age,” which features electronic data storage, retrieval, manipulation, and high-speed computing and communications, is based on high-density microelectronic (and soon nanoelectronic) solid-state integrated circuits. Revolution in wireless and optical communications technologies also necessitates fundamental understanding of the generation, propagation, and detection of the electromagnetic waves.

Bachelor of Science

The Electronics Engineering curriculum is designed to strike a balance between theoretical and laboratory experience and to impart fundamental and practical understanding of the principles required for a successful career in electronics and communications engineering. This requires a solid core of foundation courses in physics, mathematics, computer science and general engineering, which is also essential for life-long learning. Concentration courses in Electronics Engineering (that integrate theory and laboratory wherever possible) cover electromagnetics, circuits, electronics, digital design and communications. Courses in electric machinery, classical control, computer systems, the capstone senior thesis and industrial internship are also required. State-of-the-art electronics engineering elective courses provide seniors and advanced undergraduates the opportunity to develop a thrust in advanced electronics, communication systems and computers.

Electronics Engineering accepts high school students with science/mathematics background. Undeclared students may also be accepted to the program when they finish criteria courses set by the department. Admission to the program is supervised by the department and depends on available places and student's performance record.

A total of 162 credits are required for the bachelor's degree in Electronics Engineering:

Core Curriculum Requirements (30-42 credits)

Students should take MGMT 307 to meet the liberal arts core elective (Note that the prerequisite for MGMT 307 is NOT required for Engineering students).

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Engineering Core Requirements (57 credits)

CHEM	105	General Chemistry I, 3 cr.
	115L	General Chemistry Lab, 1 cr.
PHYS	111	Classical Mechanics, Sound and Heat, 3 cr.
	123L	General Physics Lab I, 1 cr.
	112	Electricity and Magnetism, 3 cr.
	124L	General Physics Lab II, 1 cr.
CSCI	214	Waves, Optics and Atomic Physics, 3 cr.
	106	Fundamentals of Computer Science, 3 cr.
	110	Programming Fundamentals, 3 cr.
MATH	131	Calculus I, 0 cr.
	132	Calculus II, 3 cr.
	231	Calculus III, 3 cr.
	232	Calculus IV, 3 cr.
	233	Differential Equations, 3 cr.
	317	Probability and Statistics, 3 cr.
ENGR	101	Introduction to Engineering, 1 cr.
	115	Descriptive Geometry and Engineering Drawing, 2 cr.
	212	Engineering Mechanics I (Statics), 3 cr.
	214	Engineering Mechanics II (Dynamics), 3 cr.
	313	Engineering Analysis and Computation I, 3 cr.
	345	Engineering Economy, 3 cr.
	364	Fundamentals of Thermofluids, 3 cr.

Concentration Requirements (51 credits)

EENG	210	Digital Logic Design, 3 cr.
	215	Circuit Analysis I, 3 cr.
	216	Circuit Analysis II, 3 cr.
	218L	Digital Logic Design Lab, 1 cr.
	219L	Circuit Analysis Lab, 1 cr.
	315	Electronics I: Basic Electronic Devices & Circuits, 3 cr.
	316	Electronics II: Analog Circuits, 3 cr.
	319L	Electronics Lab, 1 cr.
	320	Linear Systems Analysis, 3 cr.
	321	Automatic Control, 3 cr.
	341	Electromagnetic Theory I, 3 cr.
	352	Basic Organization of Computer Systems, 3 cr.
	360	Electric Machinery, 3 cr.
	420	Fundamentals of Communications I, 3 cr.
	421	Fundamentals of Communications II, 3 cr.
	432	Computer Communication Networks, 3 cr.
	439L	Communications Lab, 1 cr.
	442	Electromagnetic Waves, 3 cr.
	453	Microcontroller System Design, 3 cr.

EENG	459L	Microcontroller System Design Lab, 1 cr.
	490	Senior Project I, 1 cr.
	491	Senior Project II, 2 cr.
	497	Industrial Internship, 1 cr.

Concentration Electives (12 credits)

EENG	404L	Photonics & Optical Communication Laboratory, 1 cr.
	410	Solid-State Devices, 3 cr.
	412	VLSI Design, 3 cr.
	413	Testing of Digital Circuits, 3 cr.
	414	High Level Digital ASIC Design Using CAD, 3 cr.
	415	Integrated Circuit Fabrication: Materials & Processes, 3 cr.
	433	Telecommunication Systems, 3 cr.
	434	Optical Communication Systems, 3 cr.
	435	Advanced Digital Communication, 3 cr.
	436	Mobile Communication Systems, 3 cr.
	447	Microwave Systems, 3 cr.
	455	Computer Architecture, 3 cr.
	456	Digital Control Systems, 3 cr.
	458L	Computer Architecture Lab, 1 cr.
	480	Special Problems in Electronics Engineering, (1-3) cr.
	494	Selected Topics in Electronics Engineering, 3 cr.

General Electives (0-12 credits)

Six credit hours of the concentration electives may be used towards a minor

Electronics Engineering Courses (EENG)

210 Digital Logic Design (3 cr.)

Same as CSCI 230 and PHYS 319. Prerequisite: CSCI 106. Concurrent with EENG 218L. Offered in fall, spring and summer.

The nature of digital logic and numbering systems. Boolean algebra, Karnaugh map, decision-making elements, memory elements, latches, flip-flops, design of combinational and sequential circuits, integrated circuits and logic families, shift registers, counters and combinational circuits, adders, subtracters, multiplication and division circuits, memory types. Exposure to logic design automation software.

215 Circuit Analysis I (3 cr.)

Prerequisite: PHYS 112. Offered in fall.

Ohm's law, Kirshoff's law, Mesh current method, node-voltage method, superposition theorem, reciprocity theorem, Thevenin's theorem, Norton's theorem, maximum power transfer theorem, compensation theorem, T and II networks, transformation equations

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II to T and T to II. Transients in RC and RL circuits, time constants, mutual inductance and transformers. Time domain behavior of inductance and capacitance, energy storage.

216 Circuit Analysis II (3 cr.)

Prerequisite: EENG 215 and concurrent with MATH 233 and EENG 219L. Offered in spring.

Alternating current circuit analysis using complex numbers (phasors), complex impedance and complex admittance. Series resonance and parallel resonance, half power points, sharpness of resonance, the Q-factor, maximum power to an alternating current load, Decibels, power level measurements. The s-plane and poles and zeroes of the transfer function. Forced and natural response of circuits using complex frequency analysis. Three-phase circuits. Two-port networks and the y, z, h and ABCD parameters. Reciprocal networks. Laplace transform techniques.

218L Digital Logic Design Lab (1 cr.)

Same as CSCI 239L and PHYS 309L. Concurrent with EENG 210. Offered in fall, spring and summer.

The laboratory component will cover experiments in digital design and experiments illustrating material of course EENG 210.

219L Circuit Analysis Lab (1 cr.)

Concurrent with EENG 216. Offered in spring.

Experiments illustrating material of course EENG 216.

315 Electronics I: Basic Electronic Devices & Circuits (3 cr.)

Prerequisite: EENG 216. Offered in fall.

Devices and Basic Circuits: Introduction to Electronics, Operational Amplifiers, Diodes, Bipolar Junction Transistors (BJT's), Field Effect Transistors (FET's).

316 Electronics II: Analog Circuits (3 cr.)

Prerequisite: EENG 315, concurrent with EENG 319L. Offered in spring.

Differential and Multistage Amplifiers, Frequency Response, Feedback, Output Stages and Power Amplifiers, Analog Integrated Circuits, Filters and Tuned Amplifiers, Signal Generators and Waveform Shaping Circuits.

319L Electronics Lab (1 cr.)

Concurrent with EENG 316. Offered in spring.

Experiments illustrating material of course EENG 316.

320 Linear Systems Analysis (3 cr.)

Prerequisites: EENG 216 and MATH 233. Offered in fall.

Linearity, Fourier series, Laplace transform, stability, step and impulse response, superposition integral, block diagrams, signal graphs, state variable to solution of free and forced response of linear systems.

321 Automatic Control (3 cr.)

Prerequisite: EENG 320. Offered in spring.

Principles of closed-loop feedback control systems, general feedback theory, transfer functions of components, Eigen-Value problems, criteria for designs, systems study in the domains, Nyquist criterion, Routh criterion, root locus theory, and compensation methods. Several experiments are conducted in the Control Lab to illustrate material covered in the course.

341 Electromagnetic Theory I (3 cr.)

Same as PHYS 316. Prerequisites: PHYS 112 and MATH 232. Offered in spring.

Electric field and potential. Gauss's law; divergence. Conductors, dielectrics and capacitance. Poisson's and Laplace's equations. Electrostatic analogs. Magnetic field and vector potential. Time varying fields; displacement current. Maxwell's equations in differential form.

352 Basic Organization of Computer Systems (3 cr.)

Same as CSCI 231. Prerequisite: CSCI 110. Offered in fall and spring.

Description of a hypothetical computer system, the CPU main memory, I/O subsystem and all related components. In-depth discussion of the architecture of the Intel 80x86 based microprocessors and of available assemblers, linkers, library managers and debugging tool. Macro assembler programming techniques involving building, incorporating and maintaining libraries, and using assembler pseudo-ops and directives. Debugging and testing techniques. Interfacing a high level language with an assembly language. Chip level programming of microprocessor type systems. Topics covered include I/O ports, I/O devices and controllers, DMA channels, priority interrupts.

360 Power and Machines (3 cr.)

Prerequisites: EENG 216 and EENG 341. Offered in spring.

Power system components, Electromagnetic fundamentals and magnetic circuits theory, basic concepts and operating characteristics of transformers, AC machine fundamentals, equivalent circuit and operating characteristics of synchronous machines (generators and motors), theory of operation and basic concepts of induction motors, transmission line parameters, transmission line models and terminal characteristics, power system representation, fault analysis and protection system elements.

404L Photonics and Optical Communication Laboratory (1 cr.)

Concurrent with EENG 434. Offered occasionally.

Experiments in fiber optics illustrating concepts pertaining to fiber dispersion, attenuation measurements, characterization of light sources (LEDs and Laser diodes) and detectors (photodiodes), optical multiplexing and demultiplexing, optical and interferometric sensors.

410 Solid-State Devices (3 cr.)

Prerequisite: consent of instructor.

Offered occasionally.

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Theory of semiconductor surfaces, field effect transistors, application in static logic design, semiconductor sensors and transducers.

412 VLSI Design (3 cr.)

Prerequisite: EENG 210 and EENG 315. Offered occasionally.

Introduction to MOS transistor, equations for voltage, current, etc. Details of CMOS inverter, transmission gates. Design of Complex CMOS gates; combinational and sequential design techniques in Very Large Scale Integrated Circuits (VLSI); issues in static transmission gate and dynamic logic design. CMOS technology and rationale behind various design rules. Use CAD tools to design, layout, check and simulate some basic circuits. Design, layout and simulation of a small project. Two class periods and one three-hour lab period.

413 Testing of Digital Circuits (3 cr.)

Prerequisite: EENG 210. Offered occasionally.

Basic concepts behind testing digital circuits. Causes of permanent and temporary failures. Test pattern generation techniques including exhaustive, Pseudo-exhaustive, Path sensitization, Critical path, Random and Pseudo-random Testing. Design for testability methods for testing Integrated Circuits. Techniques for testing Printed circuit boards.

414 High Level Digital ASIC Design Using CAD (3 cr.)

Prerequisite: EENG 412. Offered occasionally.

Design of digital application-specific integrated circuits (ASICs) using synthesis CAD tools. Topics include the following: design flow, hierarchical design, hardware description languages such as VHDL, synthesis, design verification, IC test, chip-scale synchronous design, field programmable gate arrays, mask programmable gate arrays, CMOS circuits and IC process technology. For the project, students will design and implement a significant digital system using field programmable gate arrays. Two class periods and one three-hour lab period.

415 Integrated Circuit Fabrication: Materials and Processes (3 cr.)

Prerequisite: EENG 316. Offered occasionally.

Microfabrication techniques for silicon very large integrated circuits (VLSI), unit processes including lithography, native film growth, diffusion, ion implantation, thin film deposition and etching. Metal interconnects. Process integration for CMOS, BiCMOS, ECL and MEMS.

420 Fundamentals of Communications I (3 cr.)

Prerequisites: EENG 320, MATH 317 and ENGR 313, concurrent with EENG 439L. Offered in fall.

Signal representation and classification, time and frequency domains and transform, power spectral analysis. Basics of analog communication: amplitude, angle, and analog pulse modulation; modulators and demodulators; frequency multiplexing.

Basics of digital communication: sampling, quantization, pulse code modulation, time division multiplexing, binary signal formats. Introduction to Random Processes. Noise in communication systems. Introduction to Information Theory and source and channel coding.

421 Fundamentals of Communications II (3 cr.)

Prerequisite: EENG 420. Offered in spring.

Fundamentals of Digital Communications. The matched filter. Differential PCM and Delta Modulation. Geometric Representation of Signals; Binary and M-ary Modulation and their Performance Analysis and Spectral Efficiency. Channel Coding (Block codes and convolutional codes). Introduction to Spread-spectrum communications. Several experiments are conducted in the Communication Lab to illustrate material covered in the course.

432 Computer Communication Networks (3 cr.)

Prerequisites: EENG 420. Offered in spring.

Practical and theoretical issues related to networking. Topics cover introduction to computer network architecture, ISO model, relevant protocols including data link layer, network layer and transport layer protocols, the ISDN network, the SS7 protocol, high-speed networks including BISDN, frame relay and ATM, congestion and control algorithms, quality of service guarantees for throughput and delay. Internet protocol IP. Local and wide area networks.

433 Telecommunication Systems (3 cr.)

Prerequisite: EENG 420. Offered occasionally.

Information concepts (definition, type of sources, entropy, bit rate, symbol rate). Telephone system fundamentals. TV broadcasting systems. Facsimile systems. Mobile communication systems. Performance characterization of mobile systems. Introduction to satellite communication.

434 Optical Communication Systems (3 cr.)

Prerequisites: EENG 341 and PHYS 214, concurrent with EENG 404L.

Offered occasionally.

Operating principles of optical communication systems and fiber optic communication technology. Characteristics of optical fibers, laser diodes, and laser modulation, laser and fiber amplifiers, detection and demodulation, dispersion compensation, and network topologies. System topology, star networks, bus networks, layered architectures, all-optical networks.

435 Advanced Digital Communication (3 cr.)

Prerequisite: EENG 421. Offered occasionally.

Advanced Topics in Digital Communications. Inter-Symbol-Interference (ISI) in band-limited channels; Partial-response signaling; Equalization. Carrier and Timing Recovery. Modulation with Memory; CPM, MSK. Trellis-Coded Modulation. Multi-carrier

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Modulation and applications in ADSL.

436 Mobile Communication Systems (3 cr.)

Prerequisite: EENG 432. Offered occasionally.

Methods of telecommunications. The development of mobile communications systems. Structure of radio communications systems. Techniques in radio communications. Cellular telephony. Mobile radio networks. Packet-switched mobile data communications. Personal satellite communications. Channel capacity in mobile communications. Propagation modeling in mobile communications.

439L Communications Lab (1 cr.)

Concurrent with EENG 431. Offered in fall.

Experiments illustrating material of course EENG 431.

442 Electromagnetic Waves (3 cr.)

Prerequisite: EENG 341. Offered in fall.

Maxwell's equations. Plane waves in lossless and lossy media. Skin effect, flow of electromagnetic power. Poynting's theorem. Reflection and refraction. Guided waves. Boundary value problems, TEM waves, hollow waveguides, cavity resonators, microstrip waveguides, optical fibers. Interaction of field with matter and particles. Antennas and radiation of electromagnetic energy. Elements of radio transmission systems and radar. Several experiments are conducted in the Microwave Lab to illustrate material covered in the course. Boundary Value problems.

447 Microwave Systems (3 cr.)

Prerequisite: EENG 442. Offered occasionally.

Introduction to microwave engineering and wave equation review. Wave propagation and cutoff considerations. Transmission line power and mode limits. Planar and microstrip lines. Obstacles in transmission lines. Impedance matching and tuning. Quarter-wave transformer design. Microstrip transitions. Transmission line and cavity resonators. Sattering-parameters and applications. Microwave transistor amplifier gain and stability design. Microwave filter design by insertion loss method.

453 Microcontroller System Design (3 cr.)

Prerequisites: EENG 210, 316, 352 and concurrent with EENG 459L. Offered in fall.

Microcontroller architecture (Intel 8051, Motorola 68HC11). Interrupts, serial and parallel Input/Output, Timers, Analog-to-Digital and Digital-to-Analog conversion, Watchdog timers, I/O expansion, Interfacing to keypads and display devices, AC control.

455 Computer Architecture (3 cr.)

Same as CSCI 330. Prerequisites: EENG 210, 352, concurrent with EENG 458L. Offered in fall and spring.

The objectives of this course are to introduce the principles of Modern Computer Architecture and design. Topics to be discussed include Instruction Set Architectures, Arithmetic Logic Unit design, CPU data path design, CPU pipelining, memory hierarchy, cache and virtual memory, and introduction to I/O.

456 Digital Control Systems (3 cr.)

Prerequisite: EENG 321. Offered occasionally.

Design of discrete-time feedback control systems. Effects of sampling rate and word length. Programming of PID controllers. Programmable logic controllers and ladder diagrams. Interfacing sensors and actuators to microprocessors. Distributed Control Systems (DCS). Network Protocols for DCS. Fault-tolerance methods.

458L Computer Architecture Lab (1 cr.)

Same as CSCI 339L. Concurrent with EENG 455. Offered in fall and spring.

The laboratory will cover experiments in computer architecture and hardware design and experiments illustrating material of Course EENG 455.

459L Microcontroller System Design Lab (1 cr.)

Concurrent with EENG 453. Offered in fall.

Experiments illustrating material of course EENG 453.

480 Special Problems in Electronics Engineering (1-3 cr.)

Prerequisite: consent of instructor. Offered in fall and spring.

Independent study in various problem areas of electronics engineering may be assigned to individual students or to groups. Readings assigned and frequent consultations held. May be repeated for credit if content changes.

490 Senior Project I (1 cr.)

Prerequisite: senior standing. Offered in fall and spring.

A capstone project. Topics are selected by groups of students according to their area of interest and the advisor's approval. Projects address solutions to open-ended applications using an integrated engineering approach.

491 Senior Project II (2 cr.)

Prerequisite: EENG 490. Offered in fall and spring.

A continuation of the capstone project.

494 Selected topics in Electronics Engineering (3 cr.)

Prerequisite: senior standing. Offered occasionally

Course content will be selected each semester from current developments in the field of electronics engineering.

497 Industrial Internship (1 cr.)

Prerequisite: completion of 100 credit hours. Offered in fall.

Each student is required to spend a minimum of eight weeks in industrial training in Egypt or abroad. A complete account of the experience is reported, presented and evaluated.

Engineering

Courses - See Interdisciplinary Engineering Programs

ENGLISH & COMPARATIVE LITERATURE

Department of English and Comparative Literature
School of Humanities and Social Sciences

Professors: F. Ghazoul, D. Shoukri (Emerita)
Associate Professor: W. Melaney (Chair)
Assistant Professors: G. Balsamo, D. Sweet, S. Gearhart, S. Germic

Bachelor of Arts

The program in English and Comparative Literature provides the undergraduate student with an understanding of the role which literature plays in presenting men and women with images of themselves, their society, and their culture and introduces them to the different questions and answers which literature has given to the central problems of human experience.

To major in English and Comparative Literature students must have taken at least one ECLT course with not less than a C grade and be registering for the required program of the major.

A total of 120 credits is required for the bachelor's degree in English and comparative literature:

Core Curriculum (34-46 credits)

Concentration Requirements (51 credits)

(List of courses subject to change due to revisions)

ECLT	200	Introduction to Literature, 3 cr. <i>OR</i>
	201	Approaches to Literature, 3 cr.
	202	Close Reading of Literary Texts, 3 cr.
	301	Medieval Literature, 3 cr.
	302	Literature of the Renaissance, 3 cr. <i>OR</i>
	303	Seventeenth-Century Literature, 3 cr.
	304	Eighteenth-Century Literature, 3 cr. <i>OR</i>
	305	Romanticism, 3 cr.
ECLT	306	The Nineteenth-Century Novel, 3 cr. <i>OR</i>
	307	Nineteenth-Century Poetry, 3 cr.

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ECLT	308	Modern European and American Literature, 3 cr.
	309	Early American Literature, 3 cr. <i>OR</i>
	310	Nineteenth-Century American Literature, 3 cr. <i>OR</i>
	311	Modern American Literature, 3 cr.
	409	Greek Classics in Translation, 3 cr.
	410	Classics of the Ancient World, 3 cr.
	411	History of Literary Criticism, 3 cr.
	412	Modern Literary Criticism, 3 cr.

Five additional courses in the department to be chosen from among the following courses:

ECLT/HIST	209	Introduction to American Studies, 3 cr.
	220	Introduction to Film, 3 cr.
ECLT/FILM	330	Film Theory and Criticism, 3 cr.
	333	African Literature, 3 cr.
ECLT/PHIL	344	Literature and Philosophy, 3 cr.
ECLT	345	Literature and Gender, 3 cr.
	346	Third World Literature, 3 cr.
	347	Selected Topics, 3 cr.
	348	Contemporary Literature, 3 cr.
	352	Themes in Drama, 3 cr.
ECLT/THTR	353	Modern Drama, 3 cr.
	360	Shakespeare, 3 cr.
	370	Creative Writing , 3 cr.

Collateral Requirements (12 credits)

Two courses in European or American history

Two courses in 300- or 400-level Arabic literature

Electives (11-23 credits)

Minor

The minor in English and comparative literature introduces students to the analysis of the various literary genres and seeks to foster a critical appreciation and love of literature as well as an understanding of its role in society and culture.

Requirements (15 credits): any five literature courses offered by the department, exclusive of 100-level courses.

The Writing Program

Composition and Rhetoric Courses (RHET)

Assistant Professor: L. Breslin (Director)

Writing Instructors: J. Andrews, M. Amin, A. Badawi, S. Badawi, M. Baker, D. Blevins, M. Bowen, R. Byford, M. Carter, L. El Badri, A. El Shimi, M. Henry, D. Fyfe, N. Gast, R. Hoath, L. Holdijk (Associate Director of WP), D. Jones, S. Makhoul, J. Maklad, M. Manous, A. McCallum, G. McCullough, K. Saville, M. Shabka, N. Shafik, L. Turley, J. Verlenden, T. Warren, L. Youssef, W. Wali

The overall aim of the Composition and Rhetoric courses in the Department of English and Comparative Literature is to teach and refine students' skills in writing effective expository, analytical and argumentative prose essential to academic writing, and to sharpen the analytical and critical thinking skills involved in the process of writing and research.

The Writing Program, as an integral part of the Core Curriculum, believes that writing should be more than a mode of communication or end product of thought. Writing is an act of discovery: a means by which students learn about themselves and others to establish themselves as members of the academic community.

Core Curriculum Requirements

Students must fulfill 9 credits in the Writing Program: Composition and Rhetoric in two ways:

RHET 101	Approaches to Critical Writing, 3 cr.
RHET 102	Integrated Writing, 3 cr.
RHET 103	Research Writing, 3 cr.

OR

RHET 102	Integrated Writing, 3 cr.
RHET 103	Research Writing, 3 cr.
and a 300 level writing course (3 cr.) (e.g., RHET 320, 321, 322)	

English & Comparative Literature Courses (ECLT)

200 Introduction to Literature (3 cr.)

Offered every year.

For students interested in literature but not necessarily intending to major in the field, this course will enable the student to acquire the tools and learn the methods which would help him/her understand poetry, fiction and drama and develop a deeper appreciation of great literary texts from various places and times.

201 Approaches to Literature (3 cr.)

Offered every year.

The course trains students to develop the necessary skills in writing papers on literary issues by selecting an appropriate theoretical framework, applying a method of analysis, and undertaking research using the available library resources.

202 Close Reading of Literary Texts (3 cr.)

Offered every year.

The course concentrates on stylistic analysis of short literary texts and examines their aesthetic and ideological components as well as the varieties of reader response.

209 Introduction to American Studies (3 cr.)

Same as HIST 209. Offered in fall.

This interdisciplinary course is designed to introduce students to key events and texts in the history and culture of the United States. Using films, literature and historical texts, the course will examine American culture within a historical context.

220 Introduction to Film (3 cr.)

Same as FILM 220. Offered in fall and spring.

An introduction to the art of cinema, covering basic film history, theory, aesthetics, and production. Dramatic narrative (fiction), documentary (non fiction), and avant-garde subjects are analyzed in detail, and relevant films are screened in class to stimulate discussion.

299 Selected Topic for Core Curriculum (3 cr.)

Same as ARBS 299, ARBS 399, ANTH399, ARTV 299, CREL 299, HIST 299, ECON 299, EGPT 299, FILM 299, JPMC 299, MUSC 299, PHIL 299, PSYC 299, SEMR 299, SOC 299 and THTR 299. Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

301 Medieval Literature (3 cr.)

Offered every year.

The course introduces the student to the literary culture and counter-culture of the Middle Ages through reading selected autobiographical and fictional texts from St. Augustine, Abelard, Heloise, Dante, Chaucer, Attar and *The Arabian Nights*.

302 Literature of the Renaissance (3 cr.)

Offered in alternate years.

A survey of Renaissance authors, beginning with Petrarch and the origins of the Renaissance in Italy. The course traces this cultural revolution as it spread from Italy to other parts of the European continent and finally to Tudor England.

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303 Seventeenth-Century Literature (3 cr.)

Offered in alternate years.

The literary developments that followed the Renaissance are explored, culminating in discussion of John Milton and his epic masterpiece, *Paradise Lost*.

304 Eighteenth-Century Literature (3 cr.)

Offered in alternate years.

Dominant modes in European literature and thought between 1660 and 1760. Readings in English, French, German or English translations.

305 Romanticism (3 cr.)

Offered in alternate years.

Major European and American ideas and literary works of the period 1760-1848. Reading in English, French, Italian, German, Russian or English translations.

306 The Nineteenth-Century Novel (3 cr.)

Offered in alternate years.

Major European and American works of prose fiction from the period between 1789-1914. Works not originally written in English will be read in English translations.

307 Nineteenth-Century Poetry (3 cr.)

Offered in alternate years.

Works of representative European and American poets in all genres. Works not originally written in English will be read in English translations.

308 Modern European and American Literature (3 cr.)

Offered in alternate years.

Selected readings of American and European authors representing literary trends from 1900 to the present.

309 Early American Literature (3 cr.)

Offered in alternate years.

A study of American literary culture during the colonial period and the early republic, from Anne Bradstreet and the Puritan writers of the New England colonies to James Fenimore Cooper and Washington Irving.

310 Nineteenth-Century American Literature (3 cr.)

Offered in alternate years.

Works of major American writers in verse and prose, from Cooper and Bryant to Henry James, published between 1800 and 1914.

311 Modern American Literature (3 cr.)

Offered in alternate years.

Works of twentieth-century American writers. The reading list may be chosen to reflect changing ethnic and cultural phenomena and will vary from year to year.

330 Film Theory and Criticism (3 cr.)

Same as FILM 330. Prerequisite: ECLT/FILM/JRMC 220. Required for the minor in Film. Offered in fall and spring.

A historical study of the major theoretical approaches to motion picture art, including early analysis of film aesthetics, structure, and form, as well as modernist political critiques of cinema. Films will be screened in class to facilitate understanding of the readings.

333 African Literature (3 cr.)

Offered occasionally.

The course concentrates on modern literature of the African continent with special emphasis on sub-Saharan literary works, including their correspondence to North African literature. Texts by prominent writers from Africa (men and women/ black and white) will be analyzed in relation to the indigenous culture and oral creativity, as well as in relation to the colonial and post-colonial experience.

344 Literature and Philosophy (3 cr.)

Same as PHIL 344. May be repeated for credit if content changes. Offered occasionally.

The course concentrates on the intersection of the literary mode with the philosophical quest in Eastern and Western writing. Students are trained to analyze philosophical myths, tales, poems and dialogues as well as grasp the symbolic structures and expository techniques of philosophers.

345 Literature and Gender (3 cr.)

Offered occasionally.

The course investigates gender roles in literary texts and the image of women in different historical periods and cultural settings. Readings include Feminist and anti-Feminist literary and theoretical texts drawn from the North and the South.

346 Third World Literature (3 cr.)

Offered occasionally.

The course analyzes Third World literary texts from Asia, Africa and South America in their historical context and their contribution to post-colonial discourse.

347 Selected Topics (3 cr.)

Offered occasionally.

Examination of specific topics in genre and other areas of special interest and expertise of the faculty. May be repeated for credit if content changes. In recent years, the following courses have been offered under this heading: *The Arabian Nights*, *The Lyrical Mode* (in English, Arabic and French), *Autobiographies*, *Literature and Cultural History*, *Literature and the Visual Arts*, *Literature and Urban Culture*, *Theory of Narrative*, *The European Novel*, *Figures of the Scared*, T. S. Eliot, *The Bloomsbury Group* and Albert Camus.

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348 Contemporary Literature (3 cr.)

Offered in alternate years.

The course explores literary texts which marked the period following World War II as well as very recent European and American works in a comparative context.

352 Recurrent Themes in Drama (3 cr.)

Offered in alternate years.

Readings centered upon the illustration of a theme recurring through the ages in dramatic literature.

353 Modern Drama (3 cr.)

Offered in alternate years.

A study of mainly European drama in the period from Ibsen to the present, including plays by Shaw, Chekhov, Strindberg, Pirandello, Brecht, Sartre, Beckett, Pinter and others, and dealing with related developments in theatre, cultures and society.

360 Shakespeare (3 cr.)

Offered in alternate years.

Analysis of Shakespearean drama, including tragedy, comedy, history and romance. The course begins with an examination of the theatrical and historical content in which Shakespeare lived and wrote. It then focuses on individual plays, paying attention to the details of Shakespearean language, as well as to the broader issues of power, politics and gender.

370 Creative Writing (3 cr.)

Offered in fall and spring.

A workshop in which students write and discuss their own fiction, poetry, and drama. Emphasis on learning from reading works of literature, ancient and modern. May be repeated once for credit if content changes.

409 Greek Classics in Translation (3 cr.)

Offered in fall.

Major works of Greek literature since 700 B.C., chosen on the basis of merit and influence and studied in the most artistic translations.

410 Classics of the Ancient World (3 cr.)

Offered in spring.

Major works in ancient Near Eastern and Latin literatures studied in the most artistic translations.

411 History of Literary Criticism (3 cr.)

Offered in fall.

Study of central documents in the tradition of Western literary criticism, from Plato to the Romantics.

412 Modern Literary Criticism (3 cr.)

Offered in spring.

Analysis of the major trends in modern literary theory, such as Russian formalism, new criticism and post-structuralism.

440 Documentary Film (3 cr.)

Prerequisite: ECLT/FILM 330 and consent of instructor. Offered occasionally.

The course provides an introduction to the history, technique and theoretical issues of documentary filmmaking. Discussion centers on the important topics in the history of documentary and students are involved in a group production of a documentary film as a final project.

420 Honors Thesis (3 cr.)

Offered to students selected by the department who have distinguished academic records and abilities, and wish to undertake directed readings on a selected topic or author culminating in a research paper and oral defense.

The Writing Program

Composition and Rhetoric Courses (RHET)

101 Approaches to Critical Writing (3 cr.)

Offered in fall, spring and summer.

Develops proficiency in critical expository writing, critical reading and greater fluency in expression. Focuses on the writing process with an emphasis on developing the student's voice, organizing and developing ideas independently within the context of academic writing. Introduces library research and use of sources.

102 Integrated Writing (3 cr.)

Offered in fall, spring and summer.

Develops the skills to produce effective persuasive writing with a focus on organization, content, analysis of readings, critical thinking. Provides training in the use and integration of sources, library and online research.

103 Research Writing (3 cr.)

Prerequisite: RHET 102 or its equivalent. Offered in fall, spring and summer.

Develops the skills to produce extended forms of academic essays and research papers with a focus on the methods of research, process of research paper writing, integration and evaluation of sources and critical analysis.

320 Business Communication (3 cr.)

Prerequisites: RHET 103. Offered in fall, spring and summer.

This course focuses on the writing of professional documents, including reports, memos, business letters, and resumes. Also included is the formal presentation of professional reports.

202 ENGLISH & COMPARATIVE LITERATURE / UNDERGRADUATE

321 Technical Writing (3 cr.)

Prerequisites: RHET 103. Offered in fall, spring and summer.

This course focuses on the writing of scientific and/or technical reports, memos, and technical users' documents. Particular attention is also paid to technical writing in the workplace. Presentation of reports in formal settings is also covered.

322 Writing in the Humanities and Social Sciences (3 cr.)

Prerequisites: RHET 103 or equivalent. Offered in fall, spring and summer.

This course focuses on writing in the student's discipline. Particular attention is paid to the conventions of professional writing and citation, as well as a variety of approaches to delivering discipline-specific information to diverse audiences. Also included are advanced research, public writing and public presentations.

400 Writing and Editing for Publication (3 cr.)

Offered in fall.

This course develops the skills to produce effective articles and presentations with a focus on journal submission requirements, journal review and publication processes, and the legal responsibilities of writers. Provides training in the use and integration of AV equipment for presentations, primary and secondary sources and library and online research.

English Language

Courses - See English Language Institute



ENVIRONMENTAL SCIENCE

Department of Biology
School of Sciences and Engineering

Coordinated by: A. Ramadan (Chemistry), J. Miller (Biology), M. Hassan (Biology)

Minor

The minor in Environmental Sciences is an interdisciplinary degree program open to students in any major. The curriculum was designed with enough flexibility to allow students of all majors to enroll in the minor. The elective courses are designed to satisfy an individual's field of interest. Students will participate in interdepartmental seminars and become involved in the study of environmentally related problems at both the national, regional and international levels. The minor will enhance the students' career marketability. Students are required to choose an advisor for their minor from either the Department of Biology or the Department of Chemistry.

Requirements (18-19 credits):

Concentration Requirements (9-10 credits):

	BIOL	102	Essentials of Environmental Biology, 3 cr.
OR	BIOL	302	Environmental Biology for Engineers, 2 + 1 cr.
OR	BIOL	305	Environmental Biology, 3 + 1 cr.
	CHEM	104	Man and the Environment, 3 cr.
OR	CHEM	205	Environmental Analytical Chemistry, 3 cr.
OR	CHEM	311	Analytical Chemistry II, 3 cr.
	BIOL/CHEM	399	Guided Studies in Environmental Sciences, 3 cr.

Electives (9 credits)

	ANTH/SOC	370	Environmental Issues in Development, 3 cr.
	BIOL	306	Environmental Biology of the Red Sea, 4 cr.
	CENG	471	Environmental and Sanitary Engineering, 3 cr.
	MATH	112	Statistical Reasoning, 3 cr.
OR	MATH	312	Mathematical Modelling, 3 cr.
	POLS	442	Environmental Politics, 3 cr.
	SCI	260	Environmental Geology, 3 cr.
		302	Science, Technology and the Environment, 3 cr.

Students must finish their concentration requirements in biology and chemistry before taking BIOL/CHEM 399.

European-World History

Minor - See History

FILM

Department of Performing and Visual Arts
School of Humanities and Social Sciences

Assistant Professor: Samirah Al-Kassim

Minor

Film, Art, Music, and Theatre comprise the Department of Performing and Visual Arts. Cinema has been one of the influential art forms of the twentieth century. The academic study of motion pictures involves understanding their impact on culture and society, examining the aesthetic techniques used in their production, and reviewing the development of cinema as an art form. Students interested in completing a fifteen credit-hour minor in Film must begin with a prerequisite foundation course: FILM 220 (3 cr); complete two survey courses: FILM 310 and 330 (6 cr); and then choose two electives (6 cr) from the remaining courses in Film. All film courses may fulfill humanities requirements.

Film Courses (FILM)

220 Introduction to Film (3 cr.)

Same as ECLT 220. Offered in fall and spring.

An introduction to the art of cinema, covering basic film history, theory, aesthetics, and production. Dramatic narrative (fiction), documentary (non fiction), and avant-garde subjects are analyzed in detail, and relevant films are screened in class to stimulate discussion. Required for the minor in film.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

310 History of Motion Pictures (3 cr.)

Prerequisite: Film 220 or consent of instructor. Offered in the fall or spring.

A survey of international narrative cinema, from the silent period to the present. Individual films, film makers, film movements, and film genres will be studied, and important films from the respective periods will be screened in whole or part. Required for the minor in film.

330 Film Theory and Criticism (3 cr.)

Same as ECLT 330. Prerequisite: FILM 220 or consent of instructor. Offered in the fall or spring.

A historical study of the major theoretical approaches to motion picture art, including early analysis of film aesthetics, structure, and form, as well as modernist political critiques of cinema. Films will be screened in class to facilitate understanding of the readings. Required for the minor in Film.

341 Anthropology and Film (3 cr.)

Same as ANTH 341. Prerequisite: ANTH 202. Offered occasionally.

The history and practice of film in anthropology; film as ethnography; comparison of films and analytical ethnographies.

350 Video Production (3 cr.)

An introduction to film making, using single-camera videotape to study and develop basic film making techniques and strategies. Students will work on individual and group projects designed to teach the basic creative concepts of film production and the mastery of film language.

370 Selected Topics in Film (3 cr.)

Offered occasionally.

In-depth examination of specific topics in film determined by the special interests and expertise of the faculty. May be repeated for credit if content changes.

402 Independent Study (1-3 cr.)

An overall minimum B average is required for admission to the course. Prerequisite: departmental approval required. Offered in fall and spring.

With departmental approval, advanced students may arrange an individualized course topic to be completed under faculty supervision.

440 Documentary Film (3 cr.)

Offered occasionally.

A study of the non-fiction film, its international history, theoretical approaches to its structure and effects, and current issues in documentary production. Class screenings will be used to expose students to important and relevant examples of documentary cinema.

470 Advanced Seminar (3 cr.)

Prerequisite: Consent of the instructor. Offered occasionally.

In-depth examination of special advanced topics on film determined by the special interests and expertise of the faculty. Designed for advanced students.

GENDER STUDIES

School of Humanities and Social Sciences

The goal of the minor in Gender Studies is to provide undergraduate students with an interdisciplinary examination of the factors that influence our notions of male and female, masculine and feminine and the various forms of gender relations under conditions of social transformation and development. As such, the minor builds on existing curricular strengths by fostering intellectual discourse on the nature and role of gender as an analytical category fundamental to the understanding of self, society, history, politics and social change in a cross disciplinary and comparative perspective.

Minor

The minor in Gender Studies is comprised of five courses taken from different disciplines. Four of the five courses making up the minor should be taken from disciplines outside the student's major. Three of the four courses must be taken from the core undergraduate and graduate courses listed below. One of the three must be the course ANTH 360 Gender and Social Change, which provides the students with the common conceptual background which they will need to pursue other courses in the minor. Up to two courses not regularly offered which deal specifically with gender, or upon special petition, special topics courses in which the students have written research papers on some aspect of gender may be taken. Petitions must include copies of the papers which students wrote and must be submitted through the director of the Institute for Gender and Women's Studies to the executive committee of the Institute for Gender and Women's Studies.

Requirements (15 credits):

ANTH	360	Gender, Society and Social Change, 3 cr.
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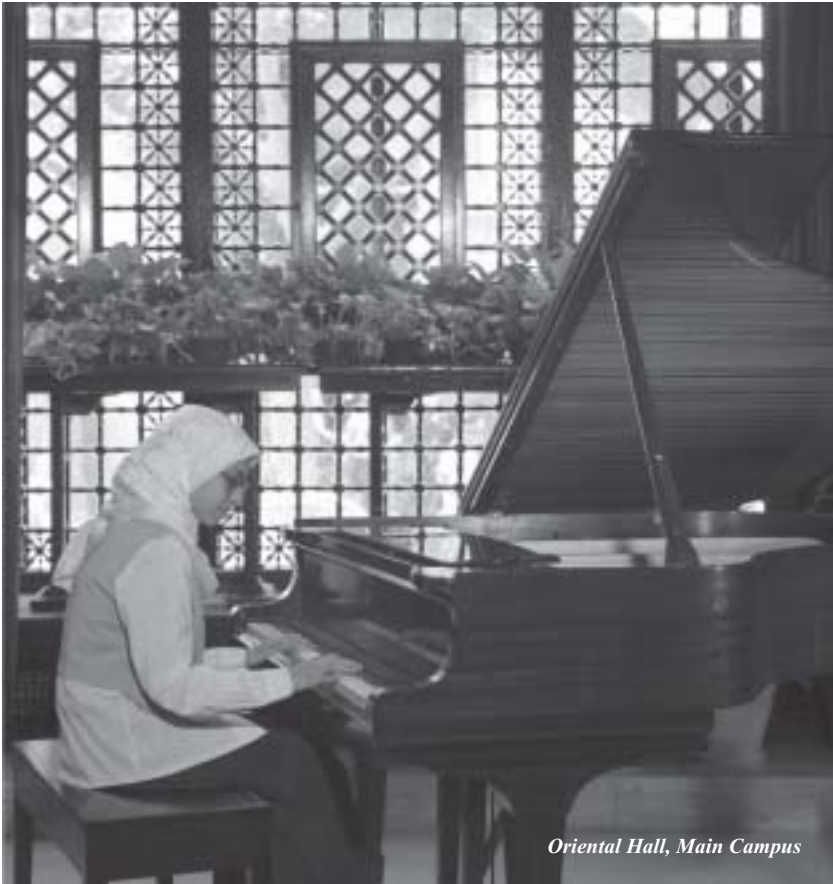
and **four** of the following:

ANTH	302	Marriage, Family and Kinship, 3 cr.
	425	Women, Islam and the State, 3 cr.
ANTH/PSYCH	407	Psychological Anthropology: Gender and Identity, 3 cr.
ARBS	310	Selected Themes and Topics in Arabic Literature in Translation, 3 cr.
		(When gender is the central concern of the course)
	323	Marriage and the Family in the Medieval and Early Modern Middle East, 3 cr.
	402	Selected Topics: Arab Women Writing, 3 cr.
ECLT	345	Literature and Gender, 3 cr.
FILM	370	Selected Topics: Both Sides of the Camera, 3 cr.
PHIL	224	Self and Society, 3 cr.
		(When gender is the central concern of the course)
	390-391	Ethics and Values, 3 cr.
		(When gender is the central concern of the course)

GENDER STUDIES / UNDERGRADUATE 207

SOC/ANTH	515	Kins, Friends and Neighbors, 3 cr.
	520	Sex Roles, Gender and Society, 3 cr.
	560	Population Dynamics, 3 cr.
THTR	352	Recurrent Themes in Drama, 3 cr.
		(When gender is the central concern of the course)

Selected or special topics courses in any department which have gender as the central concern of the course will be accepted. Some recent offerings include: HIST/MEHT 460 Selected Topics: Gender in Medieval Arab-Muslim Historical Tradition; HIST/MEHT 461 Selected Topics: Marriage and Family in the pre-modern Middle East; HIST/MEHT 462 Selected Topics: Women's History in the Modern Middle East; ANTH 400 Women and Development.



HISTORY

Department of History
School of Humanities and Social Sciences

MODERN HISTORY

Professor: J. Edwards

Associate Professors: D. Blanks (Chair), M. Reimer, B. Clough, M. Sedgwick

Assistant Professors: G. Meredith, J. Walwik, P. Ghazaleh, P. du Quenoy

The Department of History offers and administers a major in Modern History, and minors in Modern History, Modern Middle Eastern History, European-World History, and in United States History.

Bachelor of Arts

Programs in history administered by the Department of History aim to introduce students to a range of European, American and Middle Eastern history topics. The choice of course offerings is designed to allow students flexibility within the major, while the emphasis on the modern era seeks to provide students with a sound foundation for understanding the contemporary world. Where courses are cross-listed students should register with the department indicated in bold type.

History is based on the conviction that we cannot understand the present unless we understand the past. As the pace of change accelerates, it becomes increasingly important to analyze and understand the origins of new world systems. History therefore is the study of past human endeavor in all its aspects, scientific, artistic, philosophic, as well as political, economic and social. Historians are trained to evaluate a wide variety of differently recorded evidence and to seek new sources in ways that are adaptable to the understanding of history unfolding around us.

The objective of the Modern History major is to introduce students to the practice of history, and to train them in its philosophy and methodology. In doing so this major aims to give students the intellectual tools with which to approach these goals, together with an understanding of the complexity of the past. The skills of analysis, critical thinking and succinct synthesis which the study of history demands, give students a solid foundation both for advanced academic work in a variety of disciplines, and for entry into major professions such as law, diplomacy, and politics, as well as commercial and business enterprises.

A total of 120 credits is required for a bachelor's degree in Modern History.

Core Curriculum (34-46 credits)

HISTORY / UNDERGRADUATE 209

Concentration Requirements (36 credits)

HIST	202	History of Modern American Civilization, 3 cr.
	204	Early Modern Europe, 3 cr.
	205	Europe in the Age of Revolution and Reform (1789-1914), 3 cr.
HIST/POLS	206	Global Politics in the Twentieth Century, 3 cr.
HIST/ARBS	355	State and Society in the Middle East, 1699-1914, 3 cr.
	356	After Empire: Nationalism and Social Change in the Middle East, 1914-present, 3 cr.

Four of the following, including one European or American course, and one Middle Eastern history course. The course may be repeated if the topic changes.

HIST	401	Selected Topics in the History of the United States, 3 cr.
	402	Selected Topics in European History, 3 cr.
	410	Selected Topics in Modern European Imperialism, 3 cr.
	411	Selected Topics in British History, 3 cr.
	412	Selected Topics in Modern Egyptian History, 3 cr.
HIST/ARBS	454	Modern Movements in Islam, 3 cr.
	462	Selected Topics in the History of the Modern Middle East, 3 cr.

Two additional HIST courses OR one HIST course and one course from the following list:

ARBS 321, 322, 323, 324, 325, 335, 336, 343, 344, 345, 353
POLS 301, 302, 351

Electives: 38-50 credits, to be selected in consultation with a history faculty advisor.

Modern Middle Eastern History Minor

The minor in the field of Modern Middle Eastern History is designed to provide students with a substantive introduction to the making of the modern Middle East from the mid-eighteenth century to the mid-twentieth century.

Requirements (15 credits):

HIST/ARBS	355	State and Society in the Middle East, 1699-1914, 3 cr.
	356	After Empire: Nationalism and Social Change in the Middle East, 1914-present, 3 cr.

and **three** of the following:

HIST	205	Europe in the Age of Revolution and Reform (1789-1914), 3 cr.
	410	Modern European Imperialism, 3 cr.
HIST/ARBS	454	Modern Movements in Islam, 3 cr.

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HIST/ARBS	462	Selected Topics in the History of the Modern Middle East, 3 cr.
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European-World History Minor

The student in this minor gains an understanding of the main themes in the development of European society and culture including its roots in, and relations with, other civilizations from ancient to modern times.

Requirements (15 credits):

Students in this minor will take three 200-level courses as well as two courses at the 300 and/or 400 level. Courses offered include:

HIST	203	Western Civilization from Antiquity to the Middle Ages, 3 cr.
	204	Early Modern Europe, 3 cr.
	205	Europe in the Age of Revolution and Reform (1789-1914), 3 cr.
HIST/POLS	206	Global Politics in the Twentieth Century, 3 cr.
HIST	307	The Middle Ages, the Renaissance and the Reformation, 3 cr.
	308	Europe in the Age of Reason, 3 cr.
	402	Selected Topics in European History, 3 cr.

United States History Minor

This minor focuses on the United States and the nature of its democratic development from America's colonial experience in the eighteenth century, through the crisis of the Civil War, to America's position as a world leader in the twentieth century.

Requirements (15 credits):

Students in this minor will take:

HIST/ECLT	209	Introduction to American Studies, 3 cr.
HIST	401	Selected Topics in the History of the United States, 3 cr.
plus two of the following courses:		
HIST	201	History of American Civilization to the Nineteenth Century, 3 cr.
	202	History of Modern American Civilization, 3 cr.
HIST/POLS	206	Global Politics in the Twentieth Century, 3 cr.
HIST	309	The Pursuit of Liberty, 3 cr.

In addition, students should choose one American literature course from the following English and Comparative Literature offerings: ECLT 308, ECLT 311.

Modern History Minor

This minor acquaints students with major forces and events of the American,

European and Middle Eastern worlds of the nineteenth and twentieth centuries.

Requirements (15 Credits):

HIST/POLS	206	Global Politics in the Twentieth Century, 3 cr.
HIST/ARBS	356	After Empire: Nationalism and Social Change in the Middle East, 1914-present, 3 cr.

Plus three of the following:

HIST	205	Europe in the Age of Revolution and Reform (1789-1914), 3 cr.
HIST/ARBS	355	State and Society in the Middle East, 1699-1914, 3 cr.
HIST	402	Selected Topics in European History, 3 cr.
HIST/ARBS	462	Selected Topics in Modern Middle Eastern History, 3 cr.

History Courses (HIST)

200 Introduction to Historical Theory and Methodology (3 cr.)

Same as ARBS 200. Prerequisite: 3 hours of history. Offered occasionally.

The nature of historical inquiry; methods of historical research, writing, and analysis; major issues in the philosophy of history; a survey of the history.

201 History of American Civilization to the Nineteenth Century (3 cr.)

Offered occasionally.

A survey of American cultural roots from the period of exploration through the foundation of a federal American republic, social and industrial challenges, the question of slavery, and the crisis of civil war.

202 History of Modern American Civilization (3 cr.)

Offered fall and spring.

A survey of events leading to the creation of a distinct American culture as the United States meets the challenges of moral crisis, the industrial revolution, and world leadership from the nineteenth century to the present.

203 Western Civilization from Antiquity to the Middle Ages (3 cr.)

Offered in fall.

An introduction to the history of western society from ancient Greece and Rome to the Middle Ages with emphasis on the ideas and institutions that led to the growth and expansion of European civilization.

204 Early Modern Europe (3 cr.)

Offered in spring.

A survey of the development of European society from the Renaissance to the Enlightenment.

205 Europe in the Age of Revolution and Reform (1789-1914) (3 cr.)

Offered in alternate years.

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Survey of the development of European societies and ideologies from the crisis generated by the French Revolution, through the Age of Nationalism and Imperialism, up to the outbreak of the First World War.

206 Global Politics in the Twentieth Century (3 cr.)

Same as POLS 206. Offered in fall and spring.

The major political developments and socio-economic changes, treated chronologically and geographically, from the origins of the First World War to the present.

207 World History (3 cr.)

An examination of the development and diffusion of culture throughout the world from the great ancient civilizations to the present. The focus will be on making connections across time and space and developing a deeper understanding of the human community in all its aspects: political, social, economic, cultural and environmental.

209 Introduction to American Studies (3 cr.)

Same as ECLT 209. Offered in fall.

This interdisciplinary course is designed to introduce students to key events and texts in the history and culture of the United States. Using films, literature and historical texts, the course will examine American culture within a historical context.

210 Religions of the World (3 cr.)

An introduction to the academic study of religion. By looking at the history, beliefs, practices, institutions and cultural expressions of a number of different religions, students will broaden their understanding of religions other than their own, and of the diversity of the human religious experience. Students will learn to appreciate the variety of religions in the world, and the similarities and differences between them.

211 History In The Making (3 cr.)

Offered in fall and spring. May be repeated for credit when content changes.

This course offers introductory history topics, each taught in a separate section. Topics focus on major historical events or movements and will be traced through contemporary literary or visual documentary records and representations of those closely involved. Topics will also examine the way interpretation of such materials may alter over time. Topics will change according to instructor and students should consult current course schedules. May be repeated for credit when content changes.

222 Zionism and Modern Judaism (3 cr.)

Same as CREL 222.

This course allows students to understand the Zionist ideology and movement in its own terms, and in the context of modern Judaism. It also increases familiarity with Israeli history and politics. The course places Zionism in its historical and religious contexts, and examines its varieties. The Zionist movement is followed from its origins to the establishment of Israel. Related aspects of Israeli politics are then examined, with especial reference to ideological and religious debates. The course is not a history of

Israel or of the Israeli-Palestinian conflict, though both these subjects are touched upon.

243 History I: Pre-Dynastic Through Middle Kingdom Egypt (3 cr.)

Same as EGPT 243. Offered in fall.

The history of Pharaonic Egypt from predynastic times to the end of the Middle Kingdom will be covered. Literary sources will be augmented by archeological evidence. Field trips to archeological sites in the Cairo area are an obligatory aspect of the course.

244 History II: Middle Kingdom Through New Kingdom Egypt (3 cr.)

Same as EGPT 244. Prerequisites: HIST/EGPT/ARBS 243 or consent of the instructor. Offered in spring.

The course will focus on the history of Pharaonic Egypt from the Middle Kingdom to the decline of the New Kingdom and will examine the texts, monuments and artifacts that underline our understanding of this era. Field trips to the Cairo Museum and other relevant sites are a required part of the course.

246 Survey of Arab History (3 cr.)

Same as ARBS 246. Offered in fall and spring.

This course presents the history of the Arabic-speaking Middle East from pre-Islamic times to the modern era, with emphasis on the principal political, economic, social, religious, and cultural developments and their relevance to the contemporary Middle East. The course introduces students to historical methodology and different interpretive approaches. It attempts to foster a critical attitude toward sources and provides a context in which students can apply skills and concepts acquired in other courses.

247 The Making of the Modern Arab World (3 cr.)

Offered in fall or spring.

This course introduces students to selected developments, themes and debates in the Arab World in the nineteenth and twentieth centuries.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

307 The Middle Ages, the Renaissance and the Reformation (3 cr.)

Offered occasionally.

An investigation of the development of European culture in the High Middle Ages and an examination of the ways in which European society was transformed by the intellectual and religious movements known as the Renaissance and the Reformation.

308 Europe in the Age of Reason (3 cr.)

Offered occasionally.

An examination of the ways in which European intellectual developments during the

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Enlightenment were connected with socio-political changes in the seventeenth, eighteenth and early nineteenth centuries.

309 History of American Political Thought (3 cr.)

Prerequisite: HIST 201 or 202, or HIST/ECLT 209. Offered occasionally.

An examination of the major themes in American political thought and ideology from 1607 to the present with an emphasis on the ways in which conceptions of personal freedom, congregationalism, individualism, social Darwinism, civil liberties, civil rights, progressivism, liberalism, conservatism, populism, or anti-communism either reflected or influenced political action.

330 Urban Landscapes in the Modern Middle East/North Africa (3 cr.)

Offered occasionally.

This course presents diverse histories of cities in the Middle East in the nineteenth and twentieth centuries, from the impact of French and British colonialism to Arab nationalism. It introduces students to central themes in modern urban history with emphasis on the city and the production of modern lives, rural migration and the transformation of the city, women and men in the city, and urban crisis and social movements.

336 Studies in Ibn Khaldun (3 cr.)

Same as ARBS 336. Offered in alternate years.

Ibn Khaldun's work, his place in Arab Muslim thought, and his value as a critic of Muslim culture and institutions.

342 History of Egypt in the Graeco-Roman Era (3 cr.)

Same as EGPT 342. Prerequisites: HIST/EGPT 243 and 244 or instructor's consent. Offered occasionally.

This course will study the history of Egypt in the Graeco-Roman period and the momentous confrontation between Greek and Egyptian culture between 300 BC and 700 AD. It will also examine the social consequences of the spread of Christianity in Egypt and the rise of Coptic culture.

343 Arab-Islamic Civilization in the Classical Age, 600-945 A.D. (3 cr.)

Same as ARBS 343. Offered in fall.

The rise of Islam and Arab expansion, the classical period of Islamic civilization during its first centuries to the period of Abbasid political disintegration.

344 Arab-Islamic Civilization in the Middle Period, 945-1380 A.D. (3 cr.)

Same as ARBS 344. Offered in spring.

The later Abbasid caliphate, the rise of Shi'ism and the Fatimids, Sunni consolidation under the Seljuks and Ayyubids, external threats to *dar al-Islam*; the rise of Mamluks.

345 Islamic Civilization, 1380-1800 A.D. (3 cr.)

Same as ARBS 345. Offered in fall.

The decline of the Mamluks; the Timurids in Persia; the age of gunpowder: the Safavid Ottoman, and Moghul empires and their decline.

346 Societies and Cultures of the Ancient Near East (3 cr.)

Same as EGPT 346. Prerequisites: HIST/EGPT 243 and 244, or instructor's consent. Offered occasionally.

The course constitutes a historical overview of the societies and cultures of Egypt, the Mediterranean World and the Middle East, from the emergence of urban society in Iraq in the fourth millennium BCE to the rise and fall of the great empires of Babylon, Assyria, the Hittites, Archaemenid Persia, Greece and Rome. Special attention will be paid to the position of Ancient Egyptian civilization within the wider context of Ancient Near Eastern History.

355 State and Society in the Middle East, 1699-1914 (3 cr.)

Same as ARBS 355. Offered once a year.

The decay and transformation of premodern institutions and the growth of Western influence in the Middle East. Changes in the state and class structures, economic growth and new religious and political movements.

356 After Empire: Nationalism and Social Change in the Middle East, 1914-Present (3 cr.)

Same as ARBS 356. Offered in fall and spring.

Nationalism and colonialism; independence movements; and social, political, and intellectual change in the twentieth century.

398 Between Hindu and Muslim in India and Pakistan (3 cr.)

Same as CREL 398.

This course will examine some of the important dimensions of the long history of Hindu-Muslim relations in South Asia. We will concentrate on religious ideas and practices and investigate how religion has influenced politics and vice-versa. The premise of this course is that to understand the Hindu-Muslim conflicts of the past half-century, we need to look at past events and practices that have become part of the cultural memory of communalism, or that demonstrate mutual interchange and fluid boundaries of identity.

400 Independent Study (1-3 cr.)

In exceptional circumstances, students may, with department approval, arrange to study beyond the regular course offerings. Open only to juniors and seniors with a minimum B average. May be repeated for credit if content changes.

401 Selected Topics in History of the United States (3 cr.)

May be repeated for credit when content changes. Offered occasionally.

402 Selected Topics in European History (3 cr.)

May be repeated for credit when content changes. Offered occasionally.

410 Selected Topics in Modern European Imperialism (3 cr.)

May be repeated for credit when content changes. Offered occasionally.

The causes, modes and consequences of European overseas expansion in the nineteenth and twentieth centuries, with emphasis on the activities of the foremost

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imperial powers, Britain and France, in the Middle East and Africa.

411 Selected Topics in British History (3 cr.)

May be repeated for credit when content changes. Offered occasionally.

412 Selected Topics in Modern Egyptian History (3 cr.)

May be repeated for credit when content changes. Offered occasionally.

Topics to be chosen according to specific interest, such as: the making of the modern Egyptian nation; cities, towns and villages in modern Egyptian history; social and cultural history of modern Egypt.

445 Selected Topics in Coptic Studies (3 cr.)

Same as ARBS, EGPT, ANTH, SOC 445. Offered in fall.

This course allows instructors to offer a topic in Coptic Studies. The topic will be chosen from year to year in coordination with the departments concerned and the dean of the School of HUSS, and according to the individual interests and areas of expertise of the instructors. Topics chosen may include various aspects of Coptic art and history, monasticism, folklore, or other subjects. The course may be taken more than once if the topic changes. Students in these majors may petition preferably before registration to have the course included in their major requirements.

454 Modern Movements in Islam (3 cr.)

Same as ARBS 454. Offered once a year.

Changes in Muslim thought about Islamic institutions. New groupings in the nineteenth and twentieth centuries.

460 Selected Topics in Middle Eastern History, 600-1250 A. D. (3 cr.)

Same as ARBS 460. May be repeated for credit when content changes.

Offered occasionally.

461 Selected Topics in Middle Eastern History, 1250-1800 A. D. (3 cr.)

Same as ARBS 461. May be repeated for credit when content changes.

Offered occasionally.

462 Selected Topics in the History of Modern Middle East (3 cr.)

Same as ARBS 462. May be repeated for credit when content changes.

Offered occasionally.

463 Selected Topics in the History of Islamic Thought and Institutions (3 cr.)

Same as ARBS 463. May be repeated for credit when content changes. Prerequisite: consent of instructor. Offered occasionally.

Comparative Religion Courses (CREL)

210 Religions of the World (3 cr.)

An introduction to the academic study of religion. By looking at the history, beliefs, practices, institutions and cultural expressions of a number of different religions, students will broaden their understanding of religions other than their own, and of the diversity of the human religious experience. Students will learn to appreciate the variety of the religions of the world, and the similarities and differences between them.

220 Hinduism and Buddhism in India (3 cr.)

This course will explore the major dimensions of the two most important religions in India from 1500 BCE to 1000 CE. Along with providing an introduction to these two traditions, the course will give particular attention to the ways in which these religions have interacted historically.

222 Zionism and Modern Judaism (3 cr.)

Same as HIST 222.

This course allows students to understand the Zionist ideology and movement in its own terms, and in the context of modern Judaism. It also increases familiarity with Israeli history and politics. The course places Zionism in its historical and religious contexts, and examines its varieties. The Zionist movement is followed from its origins to the establishment of Israel. Related aspects of Israeli politics are then examined, with especial reference to ideological and religious debates. The course is not a history of Israel or of the Israeli-Palestinian conflict, though both these subjects are touched upon.

230 Pilgrimage Traditions in the World's Religions (3 cr.)

This course examines pilgrimage as one unifying theme in exploration of human religiosity. As a religious arena in which multiple cultural patterns converge and shape each other, pilgrimage in its various forms has also played a significant historical role in shaping trade and commerce, geographic consciousness, centers of political power, and artistic forms. While this course will regularly return to examinations of what religionists and anthropologists have called "ritual pilgrimages," such as the Islamic hajj to Mecca and the Jewish "ascent for the festival" into Jerusalem, it also investigates pilgrimage more metaphorically, by looking at allegorical, mythological, and visionary journeys. Both humanistic and social scientific interpretive and theoretical works are read as frameworks for the analyses.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

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320 Masters, Saints, and Saviors: Sacred Biography in the World's Religions (3 cr.)

This course will explore one of the most important genres in religious literature, biography of great spiritual figures. We will investigate a variety of biographical and autobiographical materials from several different religious traditions, examining both form and function and testing whether or not we can make useful cross-cultural comparisons. Principal texts are biographies on or by Gandhi (Hinduism), Hasidic masters (Judaism), Al-Ghazali (Islam), Milarepa (Buddhism), St. Teresa of Avila (Christianity), and Black Elk (Native American religion).

349 Traditions of Contemplation and Meditation in the World's Religions (3 cr.)

Through close examination of a variety of works on the contemplative life, this course aims to expose students to some of the diversity of traditions of meditation found in the major world religions--Hinduism, Judaism, Buddhism, Christianity and Islam. Through in-depth investigations of particular works from each religion, students should achieve a level of understanding from which meaningful comparative observations can be made.

398 Between Hindu and Muslim in India and Pakistan (3 cr.)

Same as HIST 398.

This course will examine some of the important dimensions of the long history of Hindu-Muslim relations in South Asia. We will concentrate on religious ideas and practices and investigate how religion has influenced politics and vice-versa. The premise of this course is that to understand the Hindu-Muslim conflicts of the past half-century, we need to look at past events and practices that have become part of the cultural memory of communalism, or that demonstrate mutual interchange and fluid boundaries of identity.

Information Systems

Minor - See Management

INTERDISCIPLINARY ENGINEERING PROGRAMS

School of Sciences and Engineering

Professors: A. Abdel Hamid, A. Elimam, E. Fahmy (IEP Director), M. Farag (Vice Provost), S. El-Haggar, M. Haroun, E. Imam, S. Khedr (CENG Chair), M. Mansour, M. Serag El-Din (MENG Chair), E. Smith, M. Younan

Associate Professors: S. Abdel-Azeem, M. Abou-Zeid, H. Amer (EENG Chair), A. Ezeldin, L. Gaafar, A. Hassanein, K. Hekman, A. Nassef, H. Salem, A. Shalaby, A. Sherif

Assistant Professors: A. Elezabi, A. Essawi, H. Hegazi

Distinguished Lecturer: H. Elabd

The Interdisciplinary Engineering Programs (IEP) administers the admission of students into the engineering programs.

All engineering students are required to take a set of common engineering courses (ENGR). The objective of these courses is to introduce the fundamentals of engineering science, and prepare the students for the more specialized courses. The common engineering courses are administered by IEP and taught by faculty from the Departments of Construction, Electronics, and Mechanical Engineering.

Refer to the respective department for the required ENGR courses.

Engineering Courses (ENGR)

101 Introduction to Engineering (1 cr.)

The course must be taken in the year of admission to the engineering program. Offered in fall and spring.

History of engineering. Engineering fields of specialization and curricula. The engineering profession: team work, professionalism, ethics, licensing, communication and societal obligations. Engineering support. Engineering approach to problem solving. Examples of major engineering projects. Course project.

115 Descriptive Geometry and Engineering Drawing (2 cr.)

One class period and one three-hour lab period. Offered in fall and spring.

Introductory descriptive geometry. Orthographic and pictorial drawing. Sectional views, auxiliary views, and conventions. Dimensioning. Free hand sketching, and both manual and computer-aided drafting.

212 Engineering Mechanics I (Statics) (3 cr.)

Prerequisites: MATH 132 and PHYS 111. Offered in fall and spring.

Fundamentals of mechanics. Equilibrium of particles, forces in space, equivalent systems, equilibrium of rigid bodies, distributed forces, center of gravity, internal actions, analysis of simple structures and machine parts. Friction. Moment of inertia.

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214 Engineering Mechanics II (Dynamics) (3 cr.)

Prerequisites: MATH 231 and ENGR 212. Offered in fall and spring.

Kinematics and kinetics of a particle, system of particles, and rigid bodies. Energy and momentum methods. Engineering applications.

229 Strength and Testing of Materials (4 cr.)

Offered in fall and spring.

Concept of stress and strain in components, mechanical behavior of materials under tensile, compressive, and shear loads, hardness, impact loading, fracture and fatigue. Analysis of stresses and the corresponding deformations in components, axial loading, torsion, pure bending, and transverse loading. Statically indeterminate problems. Transformation of plane stresses, and Mohr's circle. Three class periods and one three-hour lab period.

261 Fundamentals of Fluid Mechanics (3 cr.)

Prerequisites: PHYS 112, and ENGR 214. Offered in fall and spring.

Fluid properties, fluid statics, fluid flow. Conservation of mass and energy, continuity and Bernoulli's equations. Viscous effects for laminar and turbulent flow. Steady state closed conduit and open channel flow. Two class periods and one three-hour lab period.

313 Engineering Analysis and Computation I (3 cr.)

Prerequisite: CSCI 106 and MATH 233. Offered in fall and spring.

Solution of sets of linear equations, roots and equations, curve fitting (regression and interpolation), numerical integration and differentiation, numerical solution of ordinary differential equations, boundary value problems and introduction to finite-difference methods. The course emphasizes engineering applications and the use of computer programs for problem solving. It includes a programming based project.

318 General Electrical Engineering (3 cr.)

Prerequisite: PHYS 112, MATH 231. Offered in fall and spring.

Three-phase systems; transmission lines; electrical insulation; electrical measurements; transformers; DC machines; synchronous machines; induction motors, switchgear and substation apparatus, electric heating.

345 Engineering Economy (3 cr.)

Prerequisite: MATH 231. Offered in fall and spring.

Economic and cost concepts, the time value of money, single, multiple and series of cash flows, gradients, functional notation, nominal and effective interest rates, continuous compounding, rates of return. Computation and applications, economic feasibility of projects and worth of investments, comparison of alternatives. Replacement, depreciation and B.E. analysis. Introduction to risk analysis.

364 Fundamentals of Thermofluids (3 cr.)

Prerequisite: PHYS 111. Open for Electronics Engineering major only. Offered in fall.

Introduction to thermodynamics concepts and definitions; pure substance and ideal gases; the first law of thermodynamics, the concepts of the second law of thermodynamics, continuity; momentum and energy equations; introduction to laminar and turbulent flows; flow in conduits; introduction to turbomachinery; conduction heat transfer: one-dimensional and fins; forced and natural convection heat transfer.

International Relations

Minor - See Political Science

Islamic Art and Architecture

Minor - See Arabic Studies

Islamic Studies

Minor - See Arabic Studies



*One of the Mechanical
Engineering workshops*

JOURNALISM & MASS COMMUNICATION

Department of Journalism and Mass Communication
School of Business, Economics and Communication

Professor: H. Amin (Chair)

Senior Lecturer: S. Friedlander

Associate Professor: K. Keenan

Assistant Professors: R. Abdulla, R. Berenger

Lecturers: H. Fikry, E. Fisher, N. Hamdy, R. Jones, J. Key, I. Saleh, L. Pintak

Cairo is not only the capital of the land that gave writing to civilization, but it is also at the hub of mass communication for the entire Middle East. The journalism and mass communication program is designed to prepare students for local, national and international careers in print and electronic journalism, public relations and advertising.

Bachelor of Arts

Coursework is professionally oriented to train students to international standards in the skills of writing, reporting, editing, and production, as well as in media history, ethics, and responsibility.

To declare a sequence in the JRMJ major, students must have completed 24 hours of university coursework and must have completed or be currently enrolled in ECLT 103.

Students from Arab countries must complete the university's general requirements in Arabic language before taking 300- and 400-level courses in journalism and mass communication.

Television courses are supported by the department's professionally equipped Kamal Adham Center for Television Journalism.

A total of 120 credits is required for a bachelor's degree from this university. Students in journalism and mass communication taking professional sequences in journalism, broadcast journalism or integrated marketing communication must complete at least 36 credits.

Core Curriculum (34-46 credits)

Concentration Requirements for JMC Major (36-42 credits)

Collateral Requirements (21 credits)

General Electives/Minor (11-29 credits, depending on the number of credit hours needed to complete the 120 stated above).

JOURNALISM & MASS COMMUNICATION / UNDERGRADUATE 223

All students must take the following JMC core courses:

JRMC	200	Introduction to Mass Communication, 3 cr.
	201	Mass Media Writing I, 3 cr.
	202	Mass Media Writing II, 3 cr.
	250	Global Media Systems, 3 cr. <i>OR</i> 300 Arab Media: History, Law, and Contemporary Issues, 3 cr.
	301	Mass Media Editing, 3 cr.
	320	Introduction to Mass Communication Research, 3 cr.
	400	Mass Media Ethics and Responsibility, 3 cr.

Specializations: choose one of the following sequences in broadcast journalism, integrated marketing communication or journalism:

● ***Broadcast Journalism (18 credits)***

JRMC	337	Electronic Newsgathering, 3 cr.
	339	Television News Studio Workshop, 3 cr.
	360	Introduction to Broadcast Journalism, 3 cr.
	441	Camera and Editing Workshop, 3 cr.
	460	Radio Journalism, 3 cr.

(also choose at least **one** of the following)

JRMC	338	Broadcast News Voice, Speech and Presentation Workshop, 3 cr.
ALNG	421	Professional and Technical Writing (Broadcast Arabic), 3 cr.

● ***Integrated Marketing Communication (24 credits)***

JRMC	305	Graphic Communication I, 3 cr.
	315	Principles of Advertising, 3 cr.
	415	Public Relations Theory and Techniques, 3 cr.
	425	Integrated Marketing Communication Campaigns, 3 cr.
MGMT	307	Management Fundamentals, 3 cr.
MKTG	302	Principles of Marketing, 3 cr.
	410	Consumer-Buyer Behavior, 3 cr.

● ***Journalism (15 credits)***

JRMC	312	Newspaper Staff I, 3 cr.
	305	Graphic Communication I, 3 cr.
	401	Advanced Reporting, 3 cr.

(also at least **two** of the following courses)

JRMC	402	Reporting and Writing in Arabic, 3 cr.
	403	Feature and Magazine Writing, 3 cr.
	405	Graphic Communication II, 3 cr.

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JRMC	412	Newspaper Staff II, 3 cr.
	471	Online Journalism, 3 cr.

Collateral Requirements for all JMC students: (21 credits)

Students in journalism and broadcast journalism must select up to seven courses from the list below to satisfy a 21-credit-hour collateral requirement. Students can choose one to two courses from the list in addition to a minor of 15-18 credits in some discipline other than journalism and mass communication. Students in the integrated marketing communication specialization must select at least three courses from the following list to meet the 21-credit requirement.

ANTH	202	Cultural Anthropology, 3 cr.
ECON	201-202	Introduction to Economics I and II, 6 cr.
HIST/MEHT	356	History of the Middle East in the Twentieth Century, 3 cr.
MATH	112	Statistical Reasoning, 3 cr.
POLS	201	Introduction to Political Science, 3 cr.
POLS/HIST	206	Global Politics in the Twentieth Century, 3 cr.
POLS	310	Introduction to Development, 3 cr.
	431	Political Sociology, 3 cr.
PSYC	201-202	General Psychology I and II, 6 cr.
	301	Social Psychology, 3 cr.
SOC	201	Introduction to Sociology, 3 cr.
	450	Third World Development, 3 cr.

Minor

The study of journalism and communication provides the student with a basic exposure to news reporting and writing skills and mass media cultures.

Requirements (18 credits): JRMC 200 Introduction to Communication, JRMC 201 Mass Media Writing I, JRMC 202 Mass Media Writing II, JRMC 400 Mass Media Ethics and Responsibility, and six credits from other journalism and mass communication courses (except JRMC 499), in consultation with advisor.

Journalism & Mass Communication Courses (JRMC)

Enrollment in JRMC 200, JRMC 230, JRMC 250, JRMC 300, JRMC 310 and JRMC 400 is open to all university students. Enrollment in all other courses is limited and priority is given to students with declared JMC majors.

200 Introduction to Mass Communication (3 cr.)

Offered in fall and spring.

JOURNALISM & MASS COMMUNICATION / UNDERGRADUATE 225

An introductory survey of the theory, history, structure, and function of mass communication in the Middle East and globally.

201 Mass Media Writing I (3 cr.)

Prerequisite: Acceptance into the major. Offered in fall and spring.

Study and practice of basic writing, editing, and reporting techniques used in the international print media; newsroom practices to develop listening, reading, writing and editing skills.

202 Mass Media Writing II (3 cr.)

Prerequisite: JRMC 201. Offered in fall and spring.

Cross-media study and practice of writing and reporting for print, broadcast, Internet, public relations and advertising.

230 Introduction to Photography (3 cr.)

Offered in fall and spring.

History, composition, lighting, and other basic elements of photography. Practical applications of digital photography.

250 Global Media Systems (3 cr.)

Offered in fall and spring.

Comparative study of global communication systems and theory in relation to national and international development.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

300 Arab Media: History, Law and Contemporary Issues (3 cr.)

Offered in fall and spring.

Review of the development of pan-Arab mass media; their interrelationship with political, economic, and social institutions; and legal aspects of mass communication in the Arab world.

301 Mass Media Editing (3 cr.)

Prerequisite: JRMC 201. Offered in fall and spring.

Principles of and laboratory practice in copyediting and proofreading; headline writing, scaling and cropping photographs; print media layout and design.

305 Graphic Communication I (3 cr.)

Prerequisite: JRMC 301. Offered in fall and spring.

Introductory laboratory in basics of typography, desktop publishing and digital design of publications. Taught by lecture with practical application.

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310 Public Opinion, Persuasion and Propaganda (3 cr.)

Offered occasionally.

Theoretical and practical study of the social role of international and national mass media, policymakers and the public in formation of public opinion.

312 Newspaper Staff I (3 cr.)

Prerequisite: JRMC 202. Offered in fall and spring.

Supervised newsroom experience in reporting, writing, editing and layout of student newspaper, *Caravan*.

315 Principles of Advertising (3 cr.)

Prerequisite: JRMC 201. Offered in fall and spring.

Survey of professional principles and practices in advertising and their relationship to business and government, with special emphasis on the United States and Egypt.

320 Mass Communication Research (3 cr.)

Prerequisite: junior standing. Offered in fall and spring.

Methods and theories used in mass communication research. Emphasis on the various methods and measurement tools used in message, communicator and audience measurements. Individual and/or group projects may be possible.

330 Advanced Photography (3 cr.)

Prerequisites: JRMC 201, 230. Offered occasionally.

Theory and practice of photojournalism. Advanced photography and laboratory techniques and operations.

337 Electronic Newsgathering (3 cr.)

Same as JRMC 537. Prerequisites: acceptance into broadcast journalism specialization and JRMC 201. Offered in fall and spring.

Classroom and field training in basic electronic newsgathering. Instruction in theoretical principles that differentiate TV scriptwriting from print journalism.

338 Broadcast News Voice, Speech and Presentation Workshop (3 cr.)

Same as JRMC 538. Prerequisite: acceptance into broadcast journalism specialization. Offered in fall and spring.

Workshop to improve vocal tone resonance and articulation, posture and breathing while presenting broadcast news and features. Emphasis on developing unobtrusive and clear enunciation of English.

339 TV News Studio Workshop (3 cr.)

Same as JRMC 539. Prerequisite: acceptance in broadcast journalism sequence. Offered in fall and spring.

Studio training and workshop application of television news and public affairs broadcasting studio production, with emphasis on studio camera work (including autocue), lighting, and sound.

360 Principals of Broadcast Journalism (3 cr.)

Prerequisite: JRMCM 202. Offered in fall and spring.

Comparative history, principles and practice of radio and TV news reporting and writing.

400 Mass Media Ethics and Responsibility (3 cr.)

Offered in fall and spring.

Critical analyses of professional philosophies, standards, and practices in journalism, public relations, advertising, and other fields of mass communication. Discussion of ethical and practical considerations and dilemmas in different professional and social contexts.

401 Advanced Reporting (3 cr.)

Prerequisite: JRMCM 202. Offered in fall and spring.

Advanced principles and practice in news gathering and reporting, effective organization and presentation, and writing.

402 Reporting and Writing in Arabic (3 cr.)

Prerequisites: completion of university general requirements in Arabic and JRMCM 202. Offered in fall and spring.

Advanced principles and practice in reporting and writing in and from Arabic.

403 Feature and Magazine Writing (3 cr.)

Prerequisite: JRMCM 202. Offered in spring.

Principles and intensive practice in researching, organizing, and writing feature articles for international newspapers and magazines.

405 Graphic Communication II (3 cr.)

Prerequisite: JRMCM 305. Offered in fall and spring.

Advanced practical integration of digital text and photographs in desktop publishing of printed material using state-of-the-art production hardware and software.

406 Internship (3 cr.)

Prerequisite: Junior standing with declared sequence. Offered occasionally.

Field experience in an approved professional setting in journalism, advertising, public relations, or public information. Supervised by a professional and an AUC full-time faculty member.

412 Newspaper Staff II (3 cr.)

Prerequisite: JRMCM 312. Offered in fall and spring.

Supervised advanced newsroom experience in writing, editing, layout and management of student newspaper, *Caravan*.

415 Public Relations Theory and Techniques (3 cr.)

Prerequisite: JRMCM 315. Offered in fall.

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Principles and practical use of public relations and public information techniques, with emphasis on media use for business and non-profit organizations.

425 Integrated Marketing Communication Campaigns (3 cr.)

Prerequisite: JRMCM 315. Offered in fall.

Examination, development, and critique of advertising and marketing communication campaigns, with emphasis given to creative and media factors.

441 Camera and Editing Workshop (3 cr.)

Same as JRMCM 541 but without requirement of a studio related research project intended for graduate students in the same class. Prerequisite: JRMCM 337. Offered in fall and spring.

Intensive field and lab training with digital video camera. Computer-driven digital editing program enables video journalist to shoot and edit news events to a finished professional product.

460 Radio Journalism Production (3 cr.)

Prerequisite: JRMCM 360. Offered in fall and spring.

Studio experience in radio news production.

471 Online Journalism (3 cr.)

Prerequisite: JRMCM 202. Offered in fall and spring.

Examination of the emerging forms of information delivery by computer and related convergence of print and broadcast media. Emphasis on learning multi-media reporting skills needed to publish quality work on the Internet.

490 Special Topics in Mass Communication (1-3 cr.)

Offered occasionally.

Special topics in journalism and mass communication will vary depending on instructor. May be repeated by student for credit if content changes.

499 Directed Individual Study in Mass Communication (1-3 cr.)

Prerequisite: written project proposal endorsed by full-time faculty with project review by department. May be repeated once for credit if content changes.

Individual projects in mass communication completed under the supervision of a full-time mass communication faculty member. Students propose projects not covered by coursework that will complement their academic programs.

LINGUISTICS

English Language Institute
School of Humanities and Social Sciences

Professor Emeritus: S. El Araby

Professor: Y. El Ezabi (Director of ELI)

Associate Professors: F. Perry, P. Stevens

Assistant Professors: P. Wachols, R. Williams

Minor

The linguistics minor is administered jointly by the Department of Sociology-Anthropology-Psychology and the English Language Institute. The minor is particularly valuable as a complement to majors such as English and comparative literature, Arabic studies, psychology, sociology, anthropology, and journalism and mass communication.

Requirements (15 credits): LING 252 Introduction to Linguistics, ANTH/LING 352 Language in Culture, LING 322 Introduction to Phonetics, LING 422 Language and Human Development, and **one** of the following: JPMC 304 Arabic Newswriting and Editing or EGPT 253 Hieroglyphics I.

Linguistics Courses (LING)

200 Languages of the World (3 cr.)

This course aims to acquaint students with basic knowledge of the world's natural languages. We will look at the diversity and fundamental similarities among the languages of the world and, in doing so, explore the following topics: language families and historic relationships, linguistic typology and language universals, language policy and politics, writing systems, and language obsolescence.

252 Introduction to Linguistics (3 cr.)

Major aspects and procedures of the systematic study of human language in its biological and social contexts. Principles and techniques of linguistic analysis as they relate to cognition, symbolization and other aspects of culture.

322 Introduction to Phonetics (3 cr.)

Study of the articulatory and acoustic properties of speech sounds and features of language with particular reference to English and Arabic. Includes introductory work in transcription and technological developments in phonetic research.

352 Language in Culture (3 cr.)

Same as ANTH 352. Prerequisite: LING 252 or consent of instructor. Offered occasionally. The role played by language in humankind's symbolic relation to the world. Emphasis on linguistic analysis, ethnosemantics, sociolinguistics, expressive speech, and language and socialization as these elucidate patterns of cognitive orientation.

422 Language and Human Development (3 cr.)

Linguistic and psychological concepts in first- and second-language learning; human perceptual and productive language processes; biological foundations of language, bilingualism, multilingualism, and inferences from animal communication.

MANAGEMENT

Department of Management
School of Business, Economics and Communication

Professors: M. Abaza, S. Akabawy (Associate Vice President for Computing), B. Dodin, F. El Hitami, H. El Sherif, S. Farag, R. Fullerton, T. Hatem, M. Hassanein, H. El Karanshawy, A. Mortagy (Dean of the School of Business, Economics and Communication), E. Stuart, E. H. Valsan (Emeritus), S. Youssef, O. Zaki

Associate Professors: M. Badran, I. Hegazy (Chair), S. Imam, S. Kamel, D. Rateb, M. El Shinnawy, H. Yassin

Assistant Professors: M. Askar, K. Dahawy, H. Harlow, M. Krueger, E. Tooma

Participating Faculty: H. Abdalla, Y. Hassan, A. Kais, I. El Sebai, A. Taher

The Department of Management offers two undergraduate degree programs: The Bachelor of Accounting (BAC) and the Bachelor of Business Administration (BBA).

Vision

The vision of the Department of Management is to be a leading business learning institution in the region offering high quality academic programs comparable to those at the best universities worldwide.

Mission Statement

The mission of the Department of Management is to develop business leaders who are dedicated to the betterment of the society by providing a high quality business education to top caliber students from all segments of the Egyptian society as well as from other countries while focusing on continuous improvement and commitment to excellence in learning, intellectual contributions and services.

In support of this mission the department:

- Provides a high quality contemporary – style business education that blends a global perspective with national cultures and is relevant to the business needs of Egypt and the region.
- Provides programs that encourage the development of an entrepreneurial spirit that emphasizes creativity, innovation, individual initiative and teamwork.
- Provides learning environment that fosters faculty/student communication and promotes lifelong learning and career development.
- Encourages faculty development activities that improve teaching, maintain competence and keep faculty current with ideas and concepts in their fields.
- Seeks to develop a portfolio of intellectual contributions to learning and pedagogy, to practice, and to the theory and knowledge base of the disciplines.
- Encourages the establishment of close partnerships with the business community through consultancies and service that enhance the intellectual and economic quality of Egypt while enriching the learning process.

Core Values

In support of the mission, the faculty and staff are committed to share core values that promote:

- Individual excellence
- Personal integrity and ethical professional behavior
- Collaboration, contribution, and inclusiveness
- Life-long learning
- Continuous improvement
- Adaptation to a changing global environment
- Social responsibility and community service

Bachelor of Accounting (BAC)

The world economy has entered an era of global interaction on a scale rarely experienced before. Financial markets in various parts of the world operate twenty-four hours a day as capital seeks involvement in this global economy. Countries that are still mostly agrarian are forming active stock markets. Trade agreements in the European community and North America, the breakup of the former Soviet Union, the emergence of China as an economic power and the commercial development of many countries in Southeast Asia and South America are just a few examples of the forces at work.

After a long period of indifference, there is currently a heightened interest in international accounting and auditing standards. Within developing countries, business enterprises must develop internal management controls that allow them to compete in a world market. The rapid, and sometimes startling, social, political, technological, and economic changes that are taking place in the world economy have led to increasing recognition of the key role that accounting and accountants in all countries play in the process of economic development. This recognition, in turn, emphasizes the need for quality accounting education which this major in accounting provides.

The objective of the Bachelor of Accounting degree is to provide conceptual and practical knowledge to graduates who will prepare, report and analyze economic and financial information used for making sound managerial decisions.

The number of students accepted in the Bachelor of Accounting program is limited. Students who intend to seek the Bachelor of Accounting degree should apply in their third semester and after completing not less than 27 credit hours of study.

Students must complete the following three courses before applying to the Bachelor of Accounting degree program:

- | | | |
|----|----------|---------------------------------------|
| 1. | ACCT 211 | Financial Accounting , 3 cr. |
| 2. | ECON 201 | Introduction to Macroeconomics, 3 cr. |

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<i>OR</i>		
	ECON 202	Introduction to Microeconomics, 3 cr.
3.	MATH 112	Statistical Reasoning, 3 cr.

Based on the available space, a limited number of students who have successfully completed these courses and who meet the GPA requirements as determined by the department will be accepted in the major.

Students who seek the Bachelor of Accounting degree are not permitted to have a major or a minor in Business Administration. Students must complete a minimum of 127 credit hours for the Bachelor of Accounting degree.

Core Curriculum (34-46 credits)

Collateral Requirements

All students seeking a Bachelor of Accounting degree are required to complete the following collateral requirements (15 credits):

ECON	201	Introduction to Macroeconomics, 3 cr.
	202	Introduction to Microeconomics, 3 cr.
	216	Mathematics for Economists, 3 cr.
MATH	112	Statistical Reasoning, 3 cr.
CSCI	201	Information Technology, 3 cr.

Business Core Requirements (33 credits)

ACCT	211	Financial Accounting, 3 cr.
	212	Managerial Accounting, 3 cr.
FINC	303	Business Finance, 3 cr.
INTB	301	Introduction to International Business, 3 cr.
MGMT	300	Business Environment and Ethics, 3 cr.
	307	Management Fundamentals, 3 cr.
	311	Business Law, 3 cr.
	480	Business Planning and Strategy, 3 cr.
MKTG	302	Principles of Marketing, 3 cr.
MOIS	305	Introduction to Information Systems/ Technology, 3 cr.
OPMG	310	Operations for Competitive Advantage, 3 cr.

Accounting Requirements (21 credits)

ACCT	302	Intermediate Accounting I, 3 cr.
	303	Intermediate Accounting II, 3 cr.
	305	Advanced Accounting, 3 cr.
	405	International Accounting, 3 cr.
	406	Cost Accounting, 3 cr.

ACCT	407	Auditing, 3 cr.
	408	Tax Accounting, 3 cr.

Finance Requirements (12 credits)

FINC	406	Corporate Finance, 3 cr.
	407	Investment Analysis, 3 cr.
	415	Portfolio Theory and its Applications, 3 cr.
	424	Applied Banking, 3 cr.

Electives (0-12 credits)

Minor in Accounting

A limited number of students are accepted into the accounting minor. Students who have completed ACCT 211 and ACCT 212 and who meet requirements including the GPA as determined by the department will be permitted to declare a minor and should plan their minor with their academic advisor with the approval of the department.

Students who have a minor in accounting are not permitted to have a minor in business administration.

The accounting minor consists of at least five courses (15 credits) two of which are required, and three are electives, as follows:

Required courses:

ACCT	211	Financial Accounting, 3 cr.
	212	Managerial Accounting, 3 cr.

*Additional elective courses (at least **three**) from the following with approval of the advisor:*

ACCT	302	Intermediate Accounting I, 3 cr.
	303	Intermediate Accounting II, 3 cr.
	305	Advanced Accounting, 3 cr.
	405	International Accounting, 3 cr.
	406	Cost Accounting, 3 cr.
	407	Auditing, 3 cr.
	408	Tax Accounting, 3 cr.

Bachelor of Business Administration (BBA)

A successful economic future for Egypt and the Middle East is highly concerned with a basic understanding of the principles and practices of business as they apply to firms in a dynamic environment. The business administration curriculum provides students with a foundation in the liberal arts and sciences while enabling them to develop expertise in

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business management and practices. Major emphasis is placed on the role of business in Egypt and the Middle East.

The number of students accepted in the Bachelor of Business Administration program is limited. Students who intend to seek the BBA degree should apply in their third semester and after completing not less than 27 credit hours of study.

Students must complete the following three courses before applying to the Bachelor of Business Administration program:

- | | | |
|----|----------|---------------------------------------|
| 1. | ACCT 211 | Financial Accounting, 3 cr. |
| 2. | ECON 201 | Introduction to Macroeconomics, 3 cr. |
| | OR | |
| 3. | ECON 202 | Introduction to Microeconomics, 3 cr. |
| | MATH 112 | Statistical Reasoning, 3 cr. |

Based on the available space, a limited number of students who have successfully completed these courses and who meet the GPA requirements as determined by the department will be accepted in the BBA degree program.

Students who seek the Bachelor of Business Administration degree are not permitted to have a major or a minor in accounting.

Students must complete a minimum of 127 credit hours for the Bachelor of Business Administration degree with no more than 63 hours of courses in the business area.

Core Curriculum (34-46 credits)

Collateral Requirements

All students seeking a Bachelor of Business Administration degree must complete the following collateral requirements (15 credits)

- | | | |
|------|-----|---------------------------------------|
| ECON | 201 | Introduction to Macroeconomics, 3 cr. |
| | 202 | Introduction to Microeconomics, 3 cr. |
| | 216 | Mathematics for Economists, 3 cr. |
| MATH | 112 | Statistical Reasoning, 3 cr. |
| CSCI | 201 | Information Technology, 3 cr. |

Business Core Requirements (33 credits)

- | | | |
|------|-----|---|
| ACCT | 211 | Financial Accounting, 3 cr. |
| ACCT | 212 | Managerial Accounting, 3 cr. |
| FINC | 303 | Business Finance, 3 cr. |
| INTB | 301 | Introduction to International Business, 3 cr. |
| MGMT | 300 | Business Environment and Ethics, 3 cr. |
| MGMT | 307 | Management Fundamentals, 3 cr. |
| MGMT | 311 | Business Law, 3 cr. |

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MGMT	480	Business Planning and Strategy, 3 cr.
MKTG	302	Principles of Marketing, 3 cr.
MOIS	305	Introduction to Information Systems/ Technology, 3 cr.
OPMG	310	Operations for Competitive Advantage, 3 cr.

Concentration Requirements (21 credits)

Students seeking a BBA degree must select only one of the following four options:

1. BBA with a marketing concentration
2. BBA with a finance concentration
3. BBA with a management of information systems concentration
4. BBA with a general business concentration

1. Marketing Concentration (21 credits)

Students seeking a concentration in marketing are required to take the following courses after they complete the business core:

MKTG	405	Marketing Research, 3 cr.
MKTG	410	Consumer-Buyer Behavior, 3 cr.
MKTG	412	International Marketing, 3 cr.
MKTG	480	Marketing Strategy, 3 cr.

In addition, choose three of the following marketing elective courses

MKTG	408	Advertising and Promotion Management, 3 cr.
MKTG	411	Professional Selling and Sales Management, 3 cr.
MKTG	414	Services Marketing, 3 cr.
MKTG	416	E-Marketing, 3 cr.
MKTG	418	Principles of Public Relations, 3 cr.
MKTG	420	Advanced Marketing Research, 3 cr.
MKTG	470	Special Topics in Marketing, 3 cr.

2. Finance Concentration (21 credits)

Students seeking a concentration in finance are required to take the following courses:

FINC	406	Corporate Finance, 3 cr.
FINC	407	Investment Analysis, 3 cr.
FINC	424	Applied Banking, 3 cr.

In addition, choose four of the following finance elective courses

FINC	412	Options and Derivatives, 3 cr.
FINC	415	Portfolio Theory and its applications, 3 cr.
FINC	426	International Finance, 3 cr.
FINC	470	Special Topics in Financial Management, 3 cr.

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ECON 303 Money and Banking, 3 cr.

3. *Management of Information Systems Concentration (21 credits)*

Students seeking a concentration in Management of Information Systems (MOIS) are required to take the following courses after they complete the business core:

MOIS 406	Management Information Systems and Database Management, 3 cr.
MOIS 430	Business Information Systems Analysis and Development, 3 cr.
MOIS 432	Information and Decision Support Systems, 3 cr.
MOIS 433	Information Systems Applications and Management Functions, 3 cr.

In addition choose three of the following courses:

MOIS 402	Internet-based Information Systems, 3 cr.
MOIS 435	Introduction to Electronic Business, 3 cr.
MOIS 444	Accounting and Financial Information Systems, 3 cr.
MKTG 405	Marketing Research, 3 cr.
OPMG 403	Business Process Management and Simulation, 3 cr.

4. *General Business Concentration (21 credits)*

After completing the business core, students seeking a concentration in general business are required to take seven courses from at least five different functional areas, not to exceed two courses from any single area, at the 300 and 400 levels.

Areas for the General Business Concentration are accounting, finance, international business, management, marketing, management of information systems, and operations management.

Electives (12-24 credits)

Minor in Business Administration

The minor in business administration is designed to introduce students to the basic concepts, models and techniques of the discipline. Students who have completed the minor requirements and who meet the GPA requirement should apply for the minor in their senior year. Students who minor in business administration are not permitted to have a minor in accounting.

The minor requires completion of six courses (18 credit hours) as follows:

1.	ACCT 211	Financial Accounting, 3 cr.
2.	MGMT 307	Management Fundamentals, 3 cr.
3.	ECON 201	Introduction to Macroeconomics, 3 cr.

OR

ECON 202 Introduction to Microeconomics, 3 cr.

OR

ENGR 345 Engineering Economy, 3 cr.

4. MKTG 302 Principles of Marketing, 3 cr.

5. FINC 303 Business Finance I, 3 cr.

6. In addition, choose one additional course from the following business areas (ACCT, FINC, INTB, MGMT, MKTG, MOIS, OPMG).

Minor In Information Systems

The study of information systems focuses on the need to improve systems for the benefit of individuals, organizations and society at large. An information system is concerned not only with the technical development of systems applications but also with the interface with people and the support of different business and decision processes. The information systems minor aim to provide a supplementary course of study for students who are taking a major in disciplines outside the departments of Management and Computer Science.

Students who select a minor in information systems (IS) understand the fundamental concepts of information processing and the relationship between the underlying technology and end-user applications that are continuously changing and affecting different elements related to business and organizational development and growth... Equipped with this knowledge, the students enrolled in the minor will be able to solve different computer and information systems related problems, as well as exploring the latest in information and communication technology.

Students who minor in information systems are required to complete the following courses:

1. CSCI 106 Fundamentals of Computer Science, 3 cr.
2. MOIS 305 Introduction to Information Systems / Technology, 3 cr.
- OR*
- CSCI 201 Information Technology, 3 cr.
3. MOIS 402/CSCI 401 Internet-based Information Systems, 3 cr.
4. MOIS 430 Business Information Systems Analysis and Development, 3 cr.
5. MOIS 432 Information and Decision Support Systems, 3 cr.

Courses

Enrollment in courses is limited, and priority is given to students seeking the Bachelor of Business Administration degree or the Bachelor of Accounting degree, students enrolling in courses specified as collateral requirements in other majors, and students who have declared business administration as a minor.

Accounting (ACCT)

211 Financial Accounting (3 cr.)

Offered in fall and spring.

Accounting as an information system, with emphasis on concepts and assumptions underlying data accumulation for financial reports. This course covers basic financial accounting principles for a business enterprise. Topics include the accounting cycle, merchandising accounts, asset valuation, income measurement, partnership accounting, and corporate accounting.

212 Managerial Accounting and Analysis I (3 cr.)

Prerequisite: ACCT 211. Offered in fall and spring.

Theories and practices relating to product costing in manufacturing and service industries.

302 Intermediate Accounting I (3 cr.)

Prerequisite: ACCT 211. Offered in fall and spring.

Theory of accounting and its application to the valuation and presentation of assets, liabilities, net worth income and expense accounts. Special emphasis is placed on generally accepted accounting principles and their application.

303 Intermediate Accounting II (3 cr.)

Prerequisite: ACCT 302. Offered in fall and spring.

A continuation of Intermediate Accounting I (ACCT 302), focusing on the liabilities and equity sections in various types of ownership.

305 Advanced Accounting (3 cr.)

Prerequisite: ACCT 303. Offered in fall and spring.

Specialized topics in partnership accounting, agency and branch accounting, mergers and acquisitions, consolidated statements, fiduciary accounting, fund and non-profit accounting.

405 International Accounting (3 cr.)

Prerequisites: ACCT 303. Offered in fall and spring.

Accounting concepts, principles and methods applicable to multinational transactions and global corporations, contents include the translation of financial statements, comparative accounting systems, financial reporting, currency risk management, international accounting, standards and organization taxation problems, and the managerial aspects of multinational transactions.

406 Cost Accounting (3 cr.)

Prerequisite: ACCT 212. Offered in fall and spring.

Analysis of management accounting reports for decision making purposes. Cost analysis techniques, budgeting and performance evaluation and cost data for quantitative models and control systems.

407 Auditing (3 cr.)

Prerequisite: ACCT 303. Offered in fall and spring.

Auditing procedures and practices employed to verify the accuracy of business accounting records and the fairness of financial statements, assessments of financial reliability of those responsible for the handling of business assets, duties and responsibilities of independent auditors.

408 Tax Accounting (3 cr.)

Prerequisites: ACCT 303, MGMT 311. Offered in fall and spring.

Analysis of the tax laws as they affect the business enterprise discussion of tax cases to highlight the complexity of the tax issues and the special problems relating to formation, current operation and liquidation of business entities.

470 Special Topics in Accounting (3 cr.)

Prerequisite: Consent of Instructor. Offered occasionally.

Considers selected topics of current relevance in Accounting.

Finance (FINC)

303 Business Finance I (3 cr.)

Prerequisite: ACCT 211. Offered in fall and spring.

The study of the principles of finance and their application to business enterprises. Special emphasis on financial analysis, management of working capital, cost of capital, capital budgeting, long term financing, dividend policy and internal finance.

406 Corporate Finance (3 cr.)

Prerequisite: FINC 303. Offered in fall and spring.

The course introduces students to basic concepts of corporate finance in the Egyptian environment. The course will cover the theory and application of capital budgeting techniques and capital structure choice of firms.

407 Investment Analysis (3 cr.)

Prerequisite: FINC 303. Offered in fall and spring.

Introduction to the theory of investments. Topics include risk and return, the theory of portfolio selection, asset pricing models, valuation for stocks, bond pricing and the term structure of interest rates and options.

412 Options and Derivatives (3 cr.)

Prerequisite: FINC 407. Offered occasionally.

Overview of basic derivative securities; forwards, futures and options. The focus is on the valuation of these securities and the use of derivatives for hedging risks. More complex derivatives may be covered.

415 Portfolio Theory and its Applications (3 cr.)

Prerequisite: FINC 407. Offered occasionally.

Portfolio Theory provides students with basic concepts and models of financial theory and introduces them to the evaluation of quantity risk and return decisions. Subjects that are offered in this course: Capital assets Pricing Theory; Arbitrage Pricing Theory; Derivatives and Portfolio Selection and Management.

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424 Applied Banking (3 cr.)

Prerequisites: FINC 303. Offered twice a year.

Measuring returns and risks in banking, evaluation of a bank's performance, introduction to lending techniques and risk rating methods. Analyzing creditworthiness of business firms and financial institutions. Credit-management techniques such as asset protection, asset conversion and cash-flow analysis are introduced.

426 International Finance (3 cr.)

Same as INTB 426. Prerequisite: FINC 303. Offered occasionally.

The effect of the international financial environment on the major financial decisions of business. The international financial institution and their effect on firms operating in the international environment.

470 Special Topics in Financial Management (3 cr.)

Prerequisite: Consent of Instructor. Offered occasionally.

Considers selected topics of current relevance in Financial Management.

International Business (INTB)

301 Introduction to International Business (3 cr.)

Prerequisites: MKTG 302, MGMT 307. Offered in fall and spring.

The social, cultural, political, legal, and technological environment of international business. The theoretical relationship underlying international business transactions and the integration of functional activities in international firms.

412 International Marketing (3 cr.)

Same as MKTG 412. Prerequisite: MKTG 302. Offered in fall and spring.

The marketing problems and opportunities of the exporter, licensor, or manufacturer in a foreign country. Topics include factors in assessing world marketing opportunities and the international market mix.

426 International Finance (3 cr.)

Same as FINC 426. Prerequisite: FINC 303. Offered occasionally.

The effect of the international financial environment on the major financial decisions of business. The international financial institution and their effect on firms operating in the international environment.

Management (MGMT)

300 Business Environment and Ethics (3 cr.)

Offered in fall and spring.

Perspectives on the business environment and the ethical issues facing business. Organizational responses to environmental and ethical issues. Social responsibility of business firms.

307 Management Fundamentals (3 cr.)

Offered in fall and spring.

Aims at acquainting the student with the basic management functions and processes with a focus on planning, organizing, leading and controlling. Stresses how communication, motivation, and teamwork affect the organization, how organizations are managed, and how managers apply their skills and knowledge to meet the organizational objectives. Emphasis on the environmental constraints imposed on the Egyptian manager and applying principles of management in Egyptian enterprises.

311 Business Law (Commercial & Fiscal) (3 cr.)

Prerequisites: MGMT 307. Offered in fall and spring.

The nature, formation, and application of the law. Topics include: law and the Egyptian business environment, contracts, agency, forms of business organization, fiscal policy, taxation, commercial transaction, and governmental regulation of business.

404 Human Resources Management (3 cr.)

Prerequisite: MGMT 307. Offered occasionally.

Presents the role of human resources in modern organizations. This includes topics such as human resource strategies, job analysis, manpower planning, recruitment and selection, interviewing techniques, training and development, performance appraisal, establishing pay plans incentives and new issues in the area of human resources management.

413 Small Business Management (3 cr.)

Prerequisites: ACCT 211, MKTG 302, and MGMT 307. Offered occasionally.

An interdisciplinary course combining skills from all areas of business. Special focus on the problems confronting the small-business manager within the Middle East environment and the development of solutions to these problems.

414 Small Business Entrepreneurship (3 cr.)

Prerequisite: MGMT 413. Offered occasionally.

The creation of new business ventures with emphasis on personal rather than corporate goals and strategies. Problems of starting a business enterprise in the Middle East. The student develops an investment feasibility study for new ventures.

427 Organization Development (3 cr.)

Prerequisite: MGMT 307. Offered occasionally.

Inter-group dynamics, organizations as systems, process of organizational development, intervention strategies, organizational diagnosis, team building, structural intervention, behavioral change, resistance to change, and implementation strategies.

470 Special Topics in Management (3 cr.)

Prerequisite: Consent of Instructor. Offered occasionally.

Considers selected topics of current relevance in management.

480 Business Planning and Strategy (3 cr.)

Prerequisite: Graduating Senior. Offered in fall and spring.

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A capstone course, which integrates all business functions. Emphasis is on developing business strategies, discussing different levels of strategies, and developing a business plan for organizations.

Management of Information Systems (MOIS)

305 Introduction to Information Systems/Technology (3 cr.)

Prerequisite: CSCI 201, FINC 303 and OPMG 310. Offered in fall and spring.

This course is an introduction to information systems/technology and its applications for business students. The course explores the computer base applications in the major functional areas of business including accounting, finance, marketing, production, and personnel. It aims at the development of computer end-users and systems managers through a comprehensive coverage of business processes, systems concepts, systems types, applications software, database concepts, electronic commerce and competitive advantage.

402 Internet-based Information Systems (3 cr.)

Same as CSCI 401. Pre-requisite: MOIS 305. Offered in fall & spring.

The course aims to make students aware of the tactical and practical implications of an Internet-based information system. To provide the students with technical skills required to prepare for, manage and maintain an Internet-based information system or service, the basic understanding of the building blocks of a successful internet application, how to direct the necessary resources to manage their business on the internet and how to design a WWW site and construct HTML documents.

406 Management Information Systems and Database Management (3 cr.)

Not for credit for students who major or minor in computer science. Prerequisites: MOIS 305. Offered in fall and spring.

The course aims at defining a framework of management information systems with emphasis on the organization. It relates to a number of important organizational aspects such as the human and technological infrastructure and the needs and requirements of an organizational information system. The course also covers the relational database model, with special emphasis on the design and querying of relational databases and exploration of the relationship of database to the rest of the system.

430 Business Information Systems Analysis and Development (3 cr.)

Prerequisite: MOIS 305. Offered in spring.

The Course emphasizes various elements related to business information systems analysis and development in the new digital economy. Doing business is not as usual as before with the use of innovative information and communication technology tools and techniques and this course intends to introduce students to the opportunities enabled by various business information systems within the information economy.

432 Information & Decision Support Systems (3 cr.)

Pre-requisite: MOIS 305. Offered in fall & spring.

The course is targeted to senior MOIS students who want more expertise in developing, managing and using Decision Support Systems and applications. This course will

examine the design, development and implementation of information technology based systems that support managerial and professional work, including Communications-Driven and Group Decision Support Systems (GDSS), Data-Driven DSS, Model-Driven DSS and Knowledge-Driven DSS.

433 Information Systems Applications and Management Functions (3 cr.)

Prerequisite: MOIS 305. Offered in fall & spring.

Information and Communication technology are the backbone for every managerial function of the modern organization and are continuously being introduced into businesses to automate and link all the different functions together in an integrated way and to get information to decision makers at the right time and in the right format. This course provides a basic understanding of the integration of the IS application with the key functional areas: accounting, finance, marketing, production and personnel.

435 Introduction to Electronic Business (3 cr.)

Pre-requisite: MOIS 305. Offered in fall & spring.

The Internet is changing the way companies do business. This course will provide an introduction to the basics of electronic business. Managers and decision makers need a broad understanding of the concepts, technologies, tools, techniques and strategies associated with e-Business to be able to exploit the business development potentials of the new information based society. The course focuses on how e-Business is carried out, including marketing, web design, and electronic retailing, as well as the advantages and disadvantages of this form of commerce, the infrastructures in place to support this type of electronic business, in the global economy within which it takes place.

444 Accounting and Financial Information Systems (3 cr.)

Pre-requisite: ACCT 212, FINC 303 and MOIS 305. Offered occasionally.

This course focuses on application of information systems/information technology in the fields of Accounting and Finance. It starts with the conceptual foundations of accounting information systems and information technology in general and covers control and audit. It also focuses on accounting information systems applications and explores the computerization of the traditional transaction processing cycles in detail. It requires the students to use their knowledge in accounting and finance to analyze and design either a financial or accounting information systems.

470 Special Topics in Management of Information Systems (3 cr.)

Prerequisite: Consent of Instructor. Offered occasionally.

Considers selected topics of current relevance in management of information systems.

Marketing (MKTG)

302 Principles of Marketing (3 cr.)

Offered in fall and spring.

The nature and scope of marketing. Marketing systems and the marketing environment, definition of a market, market segmentation, and buyer behavior. The marketing

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mix: product, place, price, and promotion. Marketing research and marketing information systems. The application of these topics to the Egyptian environment constitutes an important part of the study.

405 Marketing Research (3 cr.)

Prerequisite: MKTG 302 and MATH 112. Offered in fall and spring.

The nature and scope of marketing research. The scientific method and its application in the field of marketing, research design, basic methods of collecting data, marketing research procedures, applications of marketing research.

408 Marketing Communications Management (3 cr.)

Prerequisite: MKTG 302. Offered occasionally.

An introduction to marketing communications, covering advertising, sales promotion, personal selling and public relations. The design, management and integration of an organization's marketing communications strategy.

410 Consumer-Buyer Behavior (3 cr.)

Prerequisite: MKTG 302. Offered in fall and spring.

Buyer behavior relevant to marketing decisions. Theoretical and practical implications of individual behavioral variables such as motivation, learning, perception, personality and attitudes, and group influences. Buyer behavior analyzed in terms of decision-making processes and models of individual and aggregate behavior. Special attention given to consumer behavior in the Middle East.

411 Professional Selling and Sales Management (3 cr.)

Prerequisite: MKTG 302. Offered in fall and spring.

Professional selling skills and procedures. Management of the field sales force. Organization of selling personnel, sales planning and forecasting, evaluation of sales personnel.

412 International Marketing (3 cr.)

Same as INTB 412. Prerequisite: MKTG 302. Offered occasionally.

The marketing problems and opportunities of the exporter, licensor, or manufacturer in a foreign country. Topics include factors in assessing world marketing opportunities and the international marketing mix.

414 Services Marketing (3 cr.)

Prerequisite: MKTG 302. Offered occasionally.

An elective marketing course for undergraduate students seeking greater understanding of devising and delivering services to world-class standards. The course deals with identifying service quality from the customer's perspective, designing effective service products, designing effective service delivery systems, and implementing service quality control features suitable to the Egyptian environment.

416 E-Marketing (3 cr.)

Prerequisite: MKTG 302. Offered occasionally.

Principles, best practices, and hands-on applications of E-Marketing. The course is designed to hone skills in E-Marketing, including developing a comprehensive E-Marketing plan and creating an interactive website.

418 Principles of Public Relations (3 cr.)

Prerequisite: MKTG 302. Offered occasionally.

An overview of the public relations profession in the Middle East. Public-relations principles and techniques, current public relations problems, possible solutions.

420 Advanced Marketing Research (3 cr.)

Prerequisite: MKTG 405 and 410. Offered occasionally.

An elective marketing course designed to strengthen abilities to perform marketing research at a level superior to that most marketing graduates worldwide. The topics offered will be chosen with particular emphasis on their value to Egyptian and regional organizations. Such topics include the qualitative techniques-focus groups, long interviews, participant observation, projective exercises-and advanced widely-accepted quantitative market research methods including perceptual mapping, data mining, and conjoint analysis.

470 Special topics in Marketing (3 cr.)

Prerequisite: Consent of Instructor. Offered occasionally.

Considers selected topics of current relevance in marketing.

480 Marketing Strategy (3 cr.)

Prerequisite: MKTG 405, 410 and FINC 303. Offered in fall and spring.

An integrative capstone course for students seeking a marketing specialization typically reserved for the final semester before graduation. Provides a transitional experience between the marketing concepts and techniques introduced in prior courses and the practice of marketing in real-world business situations. Students learn to integrate the various elements of marketing and the other functional areas of business and develop critical decision-making abilities in strategic marketing in the context of a rapidly changing marketplace.

Production /Operation Management (OPMG)

202 Statistics for Business (3 cr.)

Prerequisites: MATH 101 or ECON 216. Offered occasionally.

Basic concepts and applications of statistical analysis in business decisions. Methods include probability, risk analysis, estimation, forecasting, analysis of variances, and regression analysis.

310 Operations for Competitive Advantage (3 cr.)

Prerequisites: ECON 218 or MATH 112 and ECON 216 or MATH 101. Offered in fall and spring.

How firms can gain competitive advantage from the operation function. This course introduces the basic concepts, tools and principles that are essential for the analysis and improvement of business processes. Topics may include forecasting, product and service design, capacity planning, quality management, materials management and project management.

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401 Supply Chain Management (3 cr.)

Prerequisite: OPMG 310. Offered in fall and spring.

The integrative managerial issues and challenges related to developing and implementing a firm's supply chain strategy. Attention is directed to the supply chain strategy mission confronted by varied types of business organizations.

402 Production/Operations Management II (3 cr.)

Prerequisite: OPMG 310. Offered in fall and spring.

Current theory and practice in the planning, operating, and control of production/service systems. Topics include: production planning, purchasing and materials management, quality assurance, and productivity analysis.

403 Business Process Management and Simulation (3 cr.)

Prerequisite: OPMG 310. Offered in fall.

Initiatives in quality (TQM), time-based competition, balanced score card, business simulation and business dynamics, including recent development in benchmarking and business process reengineering, with particular attention given to process management through supporting process design and improvement.

404 Service Operations and Strategy (3 cr.)

Prerequisite: OPMG 310. Offered in spring.

Service organizations are dominating the global economy in terms of GDP share and employment, this is even more acute in the Egyptian economy. As such, the need to know how to design, operate and analyze service operational systems is more crucial than ever. This course covers the basic principles behind the design and operation of service enterprises with focus on service facility design, location, demand management, yield management and service capacity planning. Industries which could be considered include tourism, hospitality, financial, health care and government operations.

409 Quantitative Approach to Management (3 cr.)

Prerequisites: OPMG 402. Offered occasionally.

Topics like the philosophy and techniques of operations research, the theory of probability, inventory models, utility and decision game theory, linear programming, queuing models, and simulation methods are emphasized.

470 Special Topics in Production / Operation Management (3 cr.)

Prerequisite: Consent of Instructor. Offered occasionally.

Considers selected topics of current relevance in Production / Operation Management.

Public Administration (PADM)

308 Management in Government (3 cr.)

Offered occasionally.

Introduction to public administration and management of government enterprises. Analysis of political, economic, and social environment of public administration. Similarities between business and government administration.

MATHEMATICS

School of Sciences and Engineering

Professors: M. Hebert (Chair), M. Abd-el-Malek, A. Hadi, M. Moustafa, M. Yousif

Associate Professor: G. DeYoung

Assistant Professors: B. Lucena, M. Werner

Mathematics is the study of relationships among quantities, magnitudes and properties. It uses logical operations to find order within the appearance of chaos and to identify intrinsic relations and patterns among seemingly disparate questions and problems. The techniques of mathematics may be applied to a wide array of problems, such as the design and analysis of experiments, statistics and data analysis, mathematical modeling and operations research. As the "language" of science, it constitutes the theoretical background for computer science, engineering, and the natural sciences. The Department of Mathematics, recognizing the central position of mathematics in traditional liberal studies, provides a rigorous foundation in pure as well as applied mathematics, equipping students for further study and preparing them to use their mathematical skills in many different employment arenas.

Bachelor of Science in Mathematics

The Bachelor of Science degree in Mathematics develops a level of skill that will enable the student to apply his/her knowledge in industry or teaching, as well as prepare the student for advanced study of mathematics and other fields.

A total of 130 credits is required for the bachelor's degree in mathematics. Students may be exempted from the MATH 131 requirement by passing a placement examination.

Core Curriculum (30-42 credits)

The science requirements of the core curriculum electives are satisfied by the collateral requirements of the major.

Concentration Requirements (63 credits)

CSCI 106	Fundamentals of Computer Science, 3 cr.
MATH 131	Calculus I, 3 cr.
132	Calculus II, 3 cr.
200	Discrete Mathematics, 3 cr.
231	Calculus III, 3 cr.
232	Calculus IV, 3 cr.
233	Differential Equations, 3 cr.
302	Real Analysis I, 3 cr.
303	Linear Algebra, 3 cr.
304	Numerical Methods, 3 cr.
306	Applied Probability, 3 cr.

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MATH 401	Complex Function Theory, 3 cr.
403	Modern Algebra, 3 cr.
405	Statistical Inference, 3 cr.

Additional 21 math credits excluding MATH 100 and MATH 101. These courses may be used to satisfy the Statistics and Data Analysis Option requirements.

Collateral Requirements (14 to 16 Credits)

To be chosen among the following:

CHEM 105&115L	(4 credits)
CHEM 106&116L	(4 credits)
BIOL 104	(4 credits)
BIOL 105	(4 credits)
PHYS 111&123L	(4 credits)
PHYS 112&124L	(4 credits)
CSCI 110	(3 credits)
CSCI 210	(3 credits)

Electives (9 to 23 credits)

Courses to be chosen in consultation with the adviser, excluding MATH 100, MATH 101.

Statistics and Data Analysis Option:

Within the bachelor degree in Mathematics, students may choose the Statistics and Data Analysis Option by taking the following courses:

The 21 credits of concentration electives must include:

MATH 427	Applied Regression Methods, 3 cr.
429	Applied Multivariate Analysis, 3 cr.

and a minimum of 9 credits selected from the following:

MATH 308	Linear Programming, 3 cr.
310	Operations Research, 3 cr.
312	Mathematical Modeling, 3 cr.
406	Stochastic Processes, 3 cr.
409	Selected Topics in Mathematics, 3 cr.
410	Guided Studies in Mathematics, 1-3 cr.

Minor in Mathematics

The minor in Mathematics will acquaint non-mathematics majors with the diversity of the field and enhance the student's ability to formulate and solve problems in other disciplines.

Requirements (15 credits)

For students majoring in the Science & Engineering School:

MATH 233, MATH 303, and 3 courses among:

MATH 232 and the 300-level and 400-level MATH courses.

For all the other students:

MATH 112, MATH 131, and any other 3 MATH courses (excluding MATH 100 and MATH 101).

Minor in Applied Probability and Statistics

Applied Probability and Statistics are essential tools for analyzing data in various fields. A minor in Applied Probability and Statistics will prepare students and enhance their abilities to understand and solve problems in their own major fields. The minor in Applied Probability and Statistics is also designed to meet a demand by industry and governmental agencies for personnel who are able to utilize appropriate statistical and other quantitative methods to solve problems as diverse as quality control and population dynamics and to facilitate wise decision making in the face of uncertainty.

Requirements (15 credits)

MATH 112, MATH 306 or 317, MATH 427 and two courses from the following: MATH 405, 406, 429.

Bachelor of Science in Actuarial Science

The life of nearly every one is impacted by the work of actuarial experts. Actuarial experts apply mathematical models to improve financial decision-making by evaluating the financial implications of uncertain future events. See the Mathematics Department's Web site for a more detailed description of the work of actuarial experts. The number of certified actuarial experts in Egypt is notoriously low, whereas the demand for actuarial experts is very high. Actuarial experts are well paid. They are employed by a large variety of organizations, such as insurance companies, actuarial consulting firms, banks and other financial institutions, and government agencies like the Egyptian Insurance Supervisory Authority (EISA).

To be able to solve the problems of evaluating and measuring risk, an actuarial expert has to be trained in the disciplines of mathematics, probability, statistics, economics, finance, business law, accounting, and marketing. An actuarial expert must also know how to use computers and acquire communications skills to explain ideas to non-actuaries.

Because of the important financial implications of actuarial work, and the incomprehensibility of this work to many outside the actuarial profession, actuarial associations are set up in many countries to regulate the profession, set business ethics, and maintain disciplinary procedures for members.

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A person becomes certified as an actuarial expert by passing a series of examinations offered by an actuarial society. Examples of these organizations are:

- The American Society of Actuaries, SOA (www.soa.org)
- The American Casualty Actuarial Society, CAS (www.casact.org)
- The British Institute of Actuaries/Faculty of Actuaries (www.actuaries.org.uk/index2.html)

Upon passing a certain number of examinations, a person is designated as an Associate Actuary. After becoming an Associate, a person can choose to take a few more examinations to receive the higher designation of a Fellow Actuary. The number of examinations required for Associate or Fellow designations depends on the society. For a more detailed list of various designations see www.beanactuary.org/whatis/desig.htm. The Egyptian Society of Actuaries (ESOA) is one of about 50 actuarial associations (see www.actuaries.org/public/en/membership/full.cfm and www.beanactuary.org/whatis/organizations.htm). These associations are members of the International Actuarial Association, IAA (www.actuaries.org), which reviews and approves the standards and bylaws of all member associations. Actuarial associations vary in size. For example, the SOA membership exceeds 17,000 members, whereas the ESOA currently has less than 10 members of which only two are Fellows.

In Egypt, once a person becomes an Associate Actuary, he/she becomes eligible to obtain a license from the Egyptian Insurance Supervisory Authority (EISA) to work as an Actuarial Expert. One objective of the program leading to the Bachelor of Science degree is to reduce the huge gap between supply and demand for actuarial experts in Egypt.

What a major in Actuarial Science offers:

To summarize, there are many reasons why a student might choose to pursue the B.Sc. program in Actuarial Science. The program prepares students for:

- many positions within Egypt, where the demand for actuarial experts in insurance companies, actuarial consulting firms, banks and other financial institutions, as well as government agencies like the Egyptian Insurance Supervisory Authority (EISA), greatly exceed their supply.
- a wide variety of jobs in Egypt, in multi-national companies, and international institutions abroad, where training in mathematics, probability, statistics, economics, finance, business law, accounting, and marketing are essential.
- completing the first four of the six certification examinations jointly offered by the Society of Actuaries and Casualty Actuarial Society, an important step toward actuarial certification and toward obtaining the actuarial license from the Egyptian Insurance Supervisory Authority.

A minimum of 130 credits are required for the Bachelor of Science degree in Actuarial Science. Students may be exempted from MATH 131 requirement by passing a placement examination. Students who pass a placement examination will be required to complete 130 credits. Students can be admitted to the Actuarial Science Major at either their freshman or

sophomore years. See the Mathematics Department's Web site for a sample schedules for completing the requirements for the B.Sc. degree in Actuarial Science.

The following are the requirements for the Bachelor of Science degree in Actuarial Science:

Core Curriculum (34-46 credits)

The Actuarial Science majors are required to take the four-credit Natural Science Core requirement.

Concentration Requirements (51 credits)

MATH	131	Calculus I
	132	Calculus II
	231	Calculus III
	232	Calculus IV
	303	Linear Algebra
	306	Applied Probability
	308	Linear Programming
	312	Mathematical Modeling
	321	Mathematics of Investment
	405	Statistical Inference
	406	Stochastic Processes
	407	Bayesian Statistics and Credibility Theory
	408	Analysis of Survival and Lifetime Data
	421	Actuarial Mathematics
	427	Applied Regression Methods
	428	Analysis of Time Series Data
	429	Applied Multivariate Analysis

Collateral Requirements (33 credits)

ACCT	211	Financial Accounting
MGMT	311	Business Law (Commercial and Fiscal)
CSCI	106	Fundamentals of Computer Science
ECON	201	Introduction to Economics I
ECON	202	Introduction to Economics II
ECON	301	Macroeconomic Theory
ECON	302	Microeconomic Theory
FINC	303	Business Finance I
FINC	415	Portfolio Theory and Its Applications
MATH	412	Insurance Law and Regulations (Same as BADM 407)

Electives (0-12 credits)

Courses should be selected by the student in consultation with the advisor. The following courses are recommended as electives:

ACCT	212	Managerial Accounting and Analysis
CSCI	110	Structured Programming

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CSCI	210	Data Structures and Algorithms
CSCI	253	Fundamentals of Database Systems
CSCI	453	Database Systems
ECON	318	Introduction to Econometrics
MATH	304	Numerical Methods
MATH	409	Selected Topics in Mathematics
MATH	410	Guided Studies in Mathematics
MKTG	302	Principles of Marketing
MKTG	405	Marketing Research
ORGN	304	Personnel Management
MOIS	305	Introduction to Information Systems/Technology
MOIS	406	Management Information Systems and Database Management
MOIS	432	Information and Decision Support Systems

Mathematics Courses (MATH)

100 Algebra and Trigonometry (3 cr.)

No credit for Thannawia Amma Math/Science students, or equivalent, or students majoring in any of the departments of the School of Sciences and Engineering. Prerequisites: Thanawiyia 'Amma Arts or equivalent. Offered in fall and spring. Linear and quadratic equations, graphs, the circle, the rectangular hyperbola. Exponential and logarithmic functions, trigonometric functions. Systems of equations. Complex numbers. Roots of equations, zeros of polynomials. Binomial theorem, arithmetic and geometric series.

101 Basic Mathematics for Social Sciences (3 cr.)

No credit for science majors. Prerequisite: Thanawiyia 'Amma Science or MATH 100. Offered occasionally. Fundamentals of algebra. Equations and inequalities. Matrices. Introduction to differential and integral calculus.

112 Statistical Reasoning (3 cr.)

Prerequisite: MATH 100 concurrently or equivalent. Offered in fall and spring. Descriptive and inferential statistics, including graphing data and correlation analysis. Random variables and their probability distributions. The distribution of the sample means, the central limit theorem. Point and interval estimation and hypotheses testing. Students are instructed on the use of a statistics computer package at the beginning of the term and use it for assignments.

131 Calculus I (3 cr.)

Prerequisite: Thanawiyia, 'Amma Science or equivalent. Offered in fall and spring. Limits of one-variable functions, continuity and differentiability. Extrema and Curve sketching. Related rates. Linear approximation. Differentiation of Trigonometric functions. Applications of the derivative.

132 Calculus II (3 cr.)

Prerequisite: MATH 131 or exemption. Offered in fall and spring.
 Definite and indefinite integrals. The fundamental theorem of calculus and applications of the definite integral. Area, arc length, volumes and surfaces of revolution. Differentiation and integration of Exponential, Logarithmic, Trigonometric and other Transcendental functions. Techniques of integration. Numerical integration. Improper integrals.

199 Selected Topic for Core Curriculum (3 cr.)

Offered occasionally.
 Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

200 Discrete Mathematics (3 cr.)

Prerequisite: MATH 100 or equivalent. Offered in fall and spring.
 Sets, sequences, integers. Basic propositional and predicate logic. Methods of proof (including mathematical induction). Combinatorics, functions, relations and digraphs. Matrices and boolean matrices. Graphs and trees.

231 Calculus III (3 cr.)

Prerequisite: MATH 132. Offered in fall and spring.
 Sequences and series (including power series). Vectors and planes. Surfaces. Partial differentiation. Introduction to double integrals (including double integrals in polar coordinates).

232 Calculus IV (3 cr.)

Prerequisite: MATH 231. Offered in fall and spring.
 Multiple integrals. Parametric equations. Cylindrical and spherical coordinates. Vector-valued functions, vector calculus: Green's Theorem, Gauss Theorem and Stokes' Theorem and their applications. Complex numbers.

233 Differential Equations (3 cr.)

Prerequisite: MATH 231. Offered in fall and spring.
 First-order differential equations and applications. Higher-order differential equations. Applications of second-order linear differential equations with constant coefficients. Systems of linear differential equations. Series solutions. Laplace transform.

301 Seminar in Mathematics (1 cr.)

Prerequisite: junior standing. Offered occasionally.
 Weekly one hour seminar in different areas of Mathematics to be given by faculty or invited speakers from industries and other scientific communities.

302 Real Analysis I (3 cr.)

Prerequisite: MATH 200, 232 or consent of instructor. Offered every 3 semesters.
 Heine-Borel and Bolzano-Weierstrass theorems. Sequences and series. Continuity. Differentiability.

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303 Linear Algebra (3 cr.)

Offered in fall and spring.

Solutions of systems of linear equations. Matrices and determinants. The space \mathbb{R}^n , vector spaces and subspaces. Linear independence, basis and dimension. Inner product and orthonormal bases. Linear transformations. Eigenvalues and eigenvectors. Diagonalization. Various applications.

304 Numerical Methods (3 cr.)

Prerequisites: CSCI 106, MATH 233 concurrently. Offered once a year.

Number systems and errors. Solution of nonlinear equations. Interpolation. Systems of linear equations. Approximation. Differentiation and integration. Solution of ordinary differential equations.

305 Introduction to PDE and Boundary-Value Problems (3 cr.)

Prerequisite: MATH 233. Offered approximately every 3 semesters.

Special functions. Partial differential equations. Fourier series and integrals. Diffusion, potential and wave equations in rectangular, cylindrical, and spherical coordinates. Numerical methods.

306 Applied Probability (3 cr.)

Prerequisite: MATH 231. Offered in fall and spring.

Sample space, probability axioms, combinatorial techniques, conditional probability, independence and Bayes' theorem. Random variables. Distribution functions, moments and generating functions. Some probability distributions. Joint distribution, the Chebychev inequality and the law of large numbers. The central limit theorem and sampling distributions. Applications of probability in the social, biological, and engineering sciences.

308 Linear Programming (3 cr.)

Prerequisites: MATH 303. Offered every 3 semesters.

Formulation of linear programming problems, graphical solutions, the simplex method. The revised simplex method, dual problems and sensitivity analysis. Transportation and assignment problems.

310 Operations Research (3 cr.)

Prerequisites: MATH 231. Offered every 3 semesters. Network flows, minimal-cost network flows, maximal-flow problems. Critical-path methods and PERT. Non linear programming. Deterministic and probabilistic inventory theory. Deterministic and probabilistic dynamic programming.

312 Mathematical Modeling (3 cr.)

Prerequisites: MATH 112, or 306 or 317 and MATH 231. Offered every 3 semesters. Introduction to the mathematical modeling. Deterministic and probabilistic models in continuous and discrete times. Applications in engineering, biology, economics, computer science and environmental science.

317 Probability and Statistics (3 cr.)

Prerequisite: MATH 231. Offered in fall and spring.

A course in probability and statistics designed for computer science and engineering students. Probability is used to construct parametric models that often arise in computer science and engineering problems. Statistics is then used to estimate the parameters of these models based on available data, check the adequacy of the fitted models, and test specific hypotheses. Topics include random variables and their probability distributions including uniform, binomial, geometric, Poisson, normal, and exponential distributions; expected value of functions of random variables; stochastic simulation; sampling distributions; maximum likelihood and least squares methods of estimation; statistical inference including hypothesis testing and interval estimation.

321 Mathematics of Investment (3 cr.)

Prerequisite: MATH 132. Offered once a year.

The most commonly used mathematical functions for computing interest and discount rates are discussed. This includes simple, compound, and other forms of interest used in financial valuations, accumulated value and present value, annuities, sinking funds, amortization of debt, and determination of yield rates on securities. The theory developed in the first part of the course is then applied to the valuation of bonds, mortgages, capital budgeting, depreciation methods, and other financial instruments.

362 Formal and Mathematical Logic (3 cr.)

Same as PHIL 362. Prerequisites: MATH 200 or PHIL 221 or consent of the instructor. Offered occasionally.

Introduction to the goals and methods of mathematical logic. Propositional and predicate calculus (first order logic) are presented in detail. Goedel's completeness and incompleteness theorems, and some of the philosophico-mathematical problems in set theory, and alternative logics are discussed.

401 Complex-Function Theory (3 cr.)

Prerequisite: MATH 232. Offered every 3 semesters.

The complex plane, analytic functions. Cauchy-Riemann equations. Elementary functions, complex integration. Cauchy's theorem, Cauchy integral formula. Taylor and Laurent series. The calculus of residues.

402 Real Analysis II (3 cr.)

Prerequisite: MATH 302. Offered occasionally.

Riemann-Stieltjes integral. Sequences and series of functions. Lebesgue integral. Hausdorff measure and dimension. Linear spaces and functions.

403 Modern Algebra (3 cr.)

Prerequisite: MATH 200, 303, or consent of instructor. Offered every 3 semesters.

Sets, integers, groups. Integral domains. Fields. Rings and ideals. Homomorphisms. Quotient groups and quotient rings.

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405 Statistical Inference (3 cr.)

Prerequisites: MATH 306 or 317. Offered every 3 semesters.

Sampling distribution. Point and interval estimation, methods of moments and MLE. Hypothesis testing, Uniformly Most Powerful (UMP) and generalized likelihood ratio tests.

406 Stochastic Processes (3 cr.)

Prerequisite: MATH 306 or 317. Offered occasionally.

Stochastic processes, Markov chains, continuous-time Markov chains. Transient and Limiting behavior. Elementary queueing theory.

407 Bayesian Inference and Credibility Theory (3cr.)

Prerequisite: MATH 405. Offered once a year.

Students are taught techniques for determining whether the data available to an Actuarial Expert are sufficient (credible) for reliable evaluation. This involves techniques for finding the credibility factor. Several methods for valuation are discussed. These include the Bulmann credibility model, Bayesian approach to estimation, semi-parametric empirical Bayes estimation, and non-parametric empirical Bayes estimation.

408 Analysis of Survival and Lifetime Data (3 cr.)

Prerequisite: MATH 317 or MATH 405. Offered once a year.

Topics in this course include estimation and fitting of survival distributions under the two major data types of insurance (right censored, and right truncated data), estimation of the hazard function with Kernel Smoothing, models for estimating excess mortality, hypothesis testing for survival distributions, and the Cox proportional hazards model.

409 Selected Topics in Mathematics (3 cr.)

Prerequisite: consent of instructor. Offered occasionally.

Topics chosen according to interests of students and faculty. May be repeated for credit more than once if content changes.

410 Guided Studies in Mathematics (1-3 cr.)

Prerequisite: senior standing and consent of supervisor.

Under guidance of a faculty member and with approval of the Chairman, the student carries on reading or research on a specific mathematics topic. Student should demonstrate achievements by presenting results, submitting a report, or passing an examination as determined by the supervisor. May be repeated for credit once if content changes.

412 Insurance Law and Regulations (3cr.)

Prerequisite: Junior Standing. Same as BADM 407. Offered occasionally.

A discussion of the insurance market players and the insurance products, stressing the basic principles of insurance and how they would apply to life and non-life insurance. Reinsurance will also be discussed.

421 Actuarial Mathematics (3 cr.)

Prerequisite: MATH 321, MATH 306, MATH 406. Offered once a year.

The knowledge gained in the prerequisite courses is applied in building actuarial

models, which combine both probability and finance. Examples of models include present value model, loss models, pension plans, stochastic stock pricing models, and insurance ruin models.

427 Applied Regression Methods (3 cr.)

Prerequisite: MATH 303 and either MATH 317 or MATH 405. Offered every 3 semesters. Review of matrix algebra notation and vocabulary. Standard least squares method and application to problems arising from social, biological and engineering sciences. Deviation from assumption of multicollinearity. Variable selection methods. Analysis of variance, logistic regression models. Course includes an applied project (a thorough analysis of real-life data using computer packaged programs).

428 Analysis of Time Series Data (3 cr.)

Prerequisite: MATH 427 or equivalent. Offered once a year. This course is a continuation of MATH 427. It deals with the problems of modelling and forecasting time series data. Computer program packages are used as an aid for obtaining solutions. Topics include serial correlation, seasonal adjustments, exponential smoothing and extrapolation, state space models, moving average, autoregressive, ARMA and ARIMA models, and nonlinear time series, including ARCH models and chaos. Emphasis on model building, diagnostic checking, and model selection.

429 Applied Multivariate Analysis (3 cr.)

Prerequisite: MATH 427. Offered every 3 semesters. Techniques of multivariate statistical analysis illustrated by examples from various fields. Topics include: Multivariate normal distribution. Sample geometry and multivariate distances. Inference about a mean vector. Comparison of several multivariate means, variances, and covariances. Detection of multivariate outliers. Principle components. Factor analysis. Canonical correlation. Discriminant analysis. Multivariate multiple regression. Course includes an applied project (a thorough analysis of real-life data sets using computer-packaged programs).

495 Senior Thesis and Seminar (3 cr.)

Prerequisite: senior standing. Offered occasionally. Methods used in obtaining and reporting research. Each student selects a topic in his/her field of interest. Under the supervision of a faculty member, he/she prepares an outline, assembles a bibliography, and makes a study plan to be followed in preparing the project. After finishing the project, each participant makes an oral presentation of his/her chosen topic. The written thesis is completed after criticism and suggestions.

497 Practical Training (maximum of 2 cr.)

Prerequisite: Permission of the Department Chair or the Director of Actuarial Science Program. Offered in fall, spring and summer. Students who register in this course are required to spend a minimum of four weeks of training in industrial, commercial, or governmental establishments in Egypt or abroad. A complete record of this practical experience is presented and evaluated.

MECHANICAL ENGINEERING

School of Sciences and Engineering

Professors: A. Abdel Hamid (sabbatical), M. Farag (Vice Provost), S. El-Haggar, M. Mansour, A. Serag-Eldin (Chair), M. Younan, A. Elimam

Associate Professors: L. Gaafar, K. Hekman, A. Nassef, H. Salem, A. Shalaby, A. Essawi

Assistant Professors: H. Hegazi

Mechanical Engineering involves the application of scientific knowledge for the design and manufacturing of devices and mechanical systems that use or transfer mechanical and thermal energies. The mechanical engineer should strive both to serve the needs of the society without unduly damaging the environment, and to produce devices and systems that use energy and material resources efficiently.

Bachelor of Science

The goal of the mechanical engineering program at AUC is to prepare students for entry level professional practice in the mechanical engineering discipline both regionally and internationally, and instill in them the desire for life-long learning that enhances professional growth throughout their careers. Accordingly, the objective of the mechanical engineering program is to graduate engineers who have an appropriate background of mathematics, basic sciences and engineering science applications. Students are introduced to a broad spectrum of mechanical engineering topics augmented by modern engineering experimentation methodology and practice. They also develop a basic understanding of the context in which mechanical engineering, design and manufacturing is practiced, locally and globally, including economic and business practices, societal needs, public health and safety, environmental, cultural and ethical considerations. Graduates are capable of adapting to, and using, the ever evolving engineering tools including computer based methods and procedures in the practice of all aspects of a life long mechanical engineering profession. They are able to solve unstructured engineering problems, think critically, function well in a team, and communicate effectively.

Students are offered mechanical engineering electives concentrated in three areas: The Design concentration integrates elements of the mechanical engineering program and utilizes modern computer methods to enable the engineer to model, analyze and design mechanical components and systems. The Industrial concentration enables the engineer to analyze, design, integrate, automate and manage industrial systems. The Materials and Manufacturing concentration focuses on ways of controlling material composition, treatment, and manufacturing in order to meet design requirements, and achieve desired levels of performance.

The program is accredited by both the Accreditation Board for Engineering and Technology (ABET) and the Supreme Council of Egyptian Universities.

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Students should consult the course listings and their faculty advisor on a regular basis to ensure that prerequisites for engineering core, concentration and elective courses are met. A model course plan for the Major is provided by the Department.

A student who intends to major in Mechanical Engineering must submit a Major declaration form upon completion of 45 credit hours.

A total of 162 credits is required for the bachelor's degree in mechanical engineering:

Core Curriculum (30-42 credits)

The science requirement of the core curriculum electives is met within the engineering core requirements. Students should take MGMT 307 for social science requirement.

Engineering Core Requirements (52 credits)

CHEM	105	General Chemistry I, 3 cr.
	115L	General Chemistry I Lab, 1 cr.
PHYS	111	Classical Mechanics, Sound and Heat, 3 cr.
	123L	General Physics I Lab, 1 cr.
	112	Electricity and Magnetism, 3 cr.
	124L	General Physics II Lab, 1 cr.
CSCI	106	Fundamentals of Computer Science, 3 cr.
MATH	131	Calculus & Analytic Geometry I, no credit.
	132	Calculus & Analytic Geometry II, 3 cr.
	231	Calculus & Analytic Geometry III, 3 cr.
	233	Differential Equations, 3 cr.
	317	Probability and Statistics, 3 cr.
ENGR	101	Introduction to Engineering, 1 cr.
	115	Descriptive Geometry and Engineering Drawing, 2 cr.
	212	Engineering Mechanics I (Statics), 3 cr.
	214	Engineering Mechanics II (Dynamics), 3 cr.
	229	Strength and Testing of Materials, 4 cr.
	261	Fundamentals of Fluid Mechanics I, 3 cr.
	313	Engineering Analysis and Computation, 3 cr.
	318	General Electrical Engineering, 3 cr.
	345	Engineering Economy, 3 cr.

Concentration Requirements (50 credits)

MENG	215	Mechanical Engineering Drawing, 1 cr.
	327	Engineering Materials, 3 cr.
	339	Fundamentals of Manufacturing Processes, 3 cr.
	342	Quality and Process Control, 3 cr.
	355	Mechanics of Materials, 3 cr.
	356	Mechanical Design I, 3 cr.
	361	Fundamentals of Thermodynamics, 3 cr.
	362	Applied Fluid Mechanics, 3 cr.

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MENG	365	Applied Thermodynamics, 3 cr.
	372	Mechanical Systems, 3 cr.
	375	System Dynamics, 3 cr.
	428	Selection of Materials and Processes for Design, 3 cr.
	457	Mechanical Design II, 3 cr.
	466	Heat Transfer, 4 cr.
	490	Senior Project I, 1 cr.
	491	Senior Project II, 2 cr.
	497	Industrial Training, 1 cr.
PHYS	215	Introduction to Circuit Analysis and Devices, 3 cr.
	221L	Intermediate Physics Lab, 2 cr.

Concentration Electives (21 credit hours)

Courses must be selected from at least two of the three available concentrations of courses. A minimum of twelve credits must be taken from one concentration as follows:

Design concentration: a minimum of nine credits from courses in group A of the Design concentration and the remaining three credits from courses in either group of the concentration.

Industrial concentration: a minimum of six credits from group A courses of the Industrial concentration and six credits from its group B courses.

Materials and Manufacturing concentration: a minimum of six credits from group A courses of the Material and Manufacturing concentration and six from its group B courses.

In addition, a minimum of six credits must be taken from another area of concentration.

Pending approval of department and relevance of topic, only one of the concentration electives may be substituted for by a MENG 492 course.

Students opting for double concentration will take a minimum of twenty four credits, such that the minimum requirements of each area of concentration are satisfied.

Design Concentration

Group A:

MENG	451	Computer Aided Geometric and Solid Modeling, 3 cr.
MENG	453	Finite Element Method and Applications in Design, 3 cr.
MENG	458	Integrated Design, 3 cr.
MENG	475	Mechanical Vibrations, 3 cr.
MENG	476	Automatic Control Systems, 3 cr.

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Group B:

MENG	454	Finite Element Method in Dynamic Analysis and Design, 3 cr.
MENG	455	Design of Engineering Systems, 3 cr.
MENG	477	Robotics: Design, Analysis and Control, 3 cr.
MENG	494	Selected Topics in Design, 3 cr.

Industrial Concentration

Group A:

MENG	341	Engineering Operations Research I, 3 cr.
MENG	445	Production and Inventory Control, 3 cr.
MENG	448	Facilities Planning, 3 cr.

Group B:

MENG	433	Welding and Casting: Design, Materials and Inspection, 3 cr.
MENG	439	Advanced Manufacturing Processes, 3 cr.
MENG	446	Management of Engineering Projects, 3 cr.
MENG	447	Manufacturing Systems Automation, 3 cr.

Group C:

MENG	344	Work Analysis and Design, 3 cr.
MENG	441	Engineering Operations Research II, 3 cr.
MENG	442	Total Quality Management, 3 cr.
MENG	443	Systems Simulation, 3 cr.

Materials and Manufacturing Concentration

Group A:

MENG	425	Polymers and Composites, 3 cr.
MENG	426	Metals, Alloys and Composites, 3 cr.
MENG	427	Failure of Mechanical Components, 3 cr.

Group B:

MENG	433	Welding and Casting: Design, Materials and Inspection, 3 cr.
MENG	439	Advanced Manufacturing Processes, 3 cr.
MENG	446	Management of Engineering Projects, 3 cr.
MENG	447	Manufacturing Systems Automation, 3 cr.

Group C:

MENG	422	Materials and Manufacturing of Electronic Components, 3 cr.
MENG	429	Design of Materials, 3 cr.
MENG	434	Metal Forming: Design, Material and Processes, 3 cr.
MENG	435	Material Removal: Design, Materials and Processes, 3 cr.

General Electives (0-9 credits)

Mechanical Engineering Courses (MENG)

215 Mechanical Engineering Drawing (1 cr.)

One three hour lab period. Prerequisite: ENGR 115. Offered in fall and spring.
Computer-aided drafting. Mechanical details and assembly drawings. Working drawings. Geometrical tolerances. Welding symbols and details, introduction to 3D modeling. Introduction to civil and architectural drawings.

327 Engineering Materials (3 cr.)

Prerequisite: CHEM 105 and ENGR 229. Offered in fall and spring.
Introduction to materials. Crystal structure of solids. Construction and use of phase diagrams in materials systems. Relationship of crystal structure to properties of metallic materials and their applications. Heat treatment of steels. Types of polymers, ceramics, glasses, and semiconducting materials and their applications.

339 Fundamentals of Manufacturing Processes (3 cr.)

Two class periods and one three-hour lab period. Prerequisite: MENG 327. Offered in fall and spring.

Processing by casting, powder metallurgy, metal working, material removal, welding and joining. Processing of plastics and ceramics. Finishing processes. Materials recycling.

341 Engineering Operations Research (3 cr.)

Prerequisites: ENGR 313. Offered in fall.

Introduction to operations research, Linear Programming (LP) models; LP Solution approaches; integer programming; post optimality analysis; transportation, transshipment, and assignment problems. Maximal flow, shortest route, minimum spanning tree, and travelling salesman problems. Case studies, model formulations and applications using software.

342 Quality and Process Control (3 cr.)

Two class periods and one three hour lab period. Prerequisite: ENGR 313 and MATH 317. Offered in fall and spring.

Fundamentals of statistical quality control; control charts for variables and attributes; process capability analysis; sampling plans and techniques; introduction to design of experiments.

344 Work Analysis and Design (3 cr.)

Prerequisite: MENG 339. Offered occasionally.

Methods used in determining the most effective utilization of effort in human activity systems; work methods, analysis and design; micro motion analysis; predetermined time systems; human and rating factors; work samplings; learning curves; physiological and psychological factors; computer-aided time study.

355 Mechanics of Materials (3 cr.)

Prerequisite: ENGR 229. Offered in fall and spring.

Internal reactions, load-stress relations and transformation of stresses for generally

loaded rods. Generalized concepts of stress, strain and material relations. Energy methods. Elastic-plastic behavior of beams. Analysis of thin walled beams. Membrane theory of axisymmetric shells. Stress concentrations.

356 Mechanical Design I (3 cr.)

Two class periods and one three-hour design and analysis session. Prerequisites: ENGR 214, MENG 215 and 355. Offered in fall and spring.

Introduction to design concepts. Constructional details as affected by manufacturing, assembly, and strength considerations. Engineering materials. Design for steady and cyclic loading, and for rigidity and stability. Rigid and elastic connections. Bolts, rivets and welds. Design of shafts, springs and couplings. Use of interactive computer programs for problem solving is illustrated and encouraged. Design projects.

361 Fundamentals of Thermodynamics (3 cr.)

Prerequisite: ENGR 261 and CHEM 105. Offered in fall and spring.

Fundamental Concepts and Definitions. Thermodynamic Processes, pure substances and perfect gases, The First Law of Thermodynamics, the Second Law of Thermodynamics, the Carnot cycle. Thermodynamic Relations, Reversibility and Entropy.

362 Applied Fluid Mechanics (3 cr.)

Two class periods and one three-hour lab period. Prerequisites: MENG 361. Offered in fall and spring.

Dimensional analysis, fluid measurements, compressible flow, pipe network and water hammer, turbo machinery, pumps and turbines.

365 Applied Thermodynamics (3 cr.)

Two class periods and one three-hour lab period. Prerequisites: MENG 361. Offered in fall and spring.

Availability and second-law analysis. Power cycles: air standard and actual cycles; reversed cycles: refrigerators and heat pumps, gas mixtures, psychrometry and air conditioning, hydrocarbon reactions, waste heat recovery.

372 Mechanical Systems (3 cr.)

Prerequisites: ENGR 214, 313. Offered in fall and spring.

Position, velocity, and acceleration of mechanisms, cams, gears and gear trains, machine dynamics, rotating and reciprocating machines.

375 System Dynamics (3 cr.)

Prerequisite: PHYS 215, ENGR 313 and MENG 372. Offered in fall and spring.

Mathematical modeling of mechanical, electrical, and electromechanical systems. Free and forced vibrations for single degree of freedom systems. Free vibrations of multiple degree of freedom systems. Dynamic Balancing. State space and transfer function solutions. Introduction to automatic control.

422 Materials and Manufacturing of Electronic Components (3 cr.)

Prerequisite: MENG 327 or PHYS 325. Offered occasionally.

Materials for electronic components: types, structure and properties. Electronic

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components, semi conductors manufacturing. Printed circuit board manufacturing. PC board assembly and testing.

425 Polymers and Composites (3 cr.)

Two class periods and one three-hour laboratory. Prerequisites: MENG 339. Offered in spring.

Polymeric materials, processing and design considerations. Structure, mechanical and physical properties of polymers. Degradation of polymers. Types and properties of polymer-matrix composite materials. Manufacturing of components made of polymers and composite materials. Case studies.

426 Metals, Alloys and Composites (3 cr.)

Two class periods and one three-hour lab period. Prerequisite: MENG 339. Offered in fall.

Structure-property relationship in alloy systems. Imperfections in solids. Diffusion and phase transformation. Heat treatment of ferrous and non-ferrous alloys. Structure, properties and processing of metal matrix composites (MMCs). Behavior of metallic alloys and composite materials in service. Case studies and laboratory experiments.

427 Failure of Mechanical Components (3 cr.)

Prerequisite: MENG 339. Offered in spring.

Mechanical failures, fracture mechanics, types of corrosion. Failure modes: fracture fatigue, creep, corrosion and wear. Diagnosis and prevention of failures. Case studies.

428 Selection of Materials and Processes for Design (3 cr.)

Prerequisite: MENG 339 and 356. Offered in fall and spring.

Effect of material properties on design. Effect of manufacturing processes on design. Failure and reliability of components in service. Economics of materials and manufacturing processes. Decision making and the selection process. Integration of design and economic analysis with materials and process selection. Case studies.

429 Design of Materials (3 cr.)

Prerequisite: MENG 327. Offered occasionally.

Modification of existing materials production or production of new ones in order to satisfy a broad range of predetermined design criteria and to have the optimum value of several physical and chemical properties. Topics covered include doping, diffusion, texture and recrystallization, domain structures, age-hardening and phase transformations, zone refining, and composite materials and foams.

433 Welding and Casting : Design, Materials and Inspection (3 cr.)

Two class periods and one three-hour laboratory. Prerequisites: MENG 339. Offered in fall.

Constitution and structure of cast and welded alloys. Solidification and heat treatment of casting. Welding codes and specifications. Properties of cast and welded components. Design considerations for castings and weldments.

434 Metal Forming: Design, Materials and Processes (3 cr.)

Two class periods and one three-hour laboratory. Prerequisite: MENG 339. Offered in spring.

Mechanical and metallurgical fundamentals of materials for metal forming processes. Process parameters, forming loads, process design, tool design in different processes.

435 Materials Removal: Design, Materials and Processes (3 cr.)

Two class periods and one three-hour laboratory. Prerequisites: MENG 339. Offered in occasionally.

Mechanical and metallurgical fundamentals of conventional and non-conventional material removal; design of special cutting tools; jigs and fixtures; manufacturing systems concepts in production and design.

439 Advanced Manufacturing Processes (3 cr.)

Two class periods and one three-hour lab period. Prerequisite: MENG 339. Offered in fall. Nontraditional manufacturing processes, such as laser welding and cutting, spark erosion and water jet machining. Automation of manufacturing processes. Numerically-controlled machine tools. NC programming. Economics of nontraditional and automated manufacturing.

441 Engineering Operations Research II (3 cr.)

Prerequisite: MENG 341 and MATH 317. Offered occasionally.

Integer programming: cutting plane, branch and bound; queuing models: single server, multiple servers, limited capacity, finite sources; simulation: Monte Carlo, simulation languages; dynamic programming: continuous and multiple states; goal programming: partitioning algorithm; game theory: two persons, nonzero sum, mixed strategies.

442 Total Quality Management (3 cr.)

Prerequisite: MENG 342. Offered in spring.

Quality assurance; quality management systems; quality measurement; quality of design and performance; reliability; ISO standards. Quality audits.

443 Systems Simulation (3 cr.)

Prerequisite: MENG 342. Offered occasionally.

Basic concepts; examples of different production and service systems; pseudo random numbers; queuing models; random variate generation; discrete-event simulation; simulation languages; model validation and analysis of simulation data.

445 Production and Inventory Control (3 cr.)

Prerequisites: ENGR 313 and 345. Offered in spring.

Basic concepts of production management; forecasting; break-even analysis, aggregate production planning; inventory management; master scheduling, materials requirement planning; capacity planning; resource allocation and scheduling.

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446 Management of Engineering Projects (3 cr.)

Prerequisite: ENGR 313. Offered in fall.

Modeling of projects, tasks and sub tasks as activity networks. Principles and practices of critical path methodology under conditions of certainty (CPM) and uncertainty (PERT); resource loading and cost crashing concepts; project control; and extensive use of computer programs used in managing engineering projects.

447 Manufacturing System Automation (3 cr.)

Two class periods and one three-hour lab period. Prerequisites: ME 339. Offered in spring.

Computer assisted manufacturing systems NC, CNC, DNC, robotics, material handling, group technology, flexible manufacturing systems, process planning and control.

448 Facilities Planning (3 cr.)

Prerequisite: MENG 339. Offered in spring.

Process analysis; operation analysis, job design; facility location; facility layout; materials handling systems; storage and warehousing; office layout; design principles and analytical solution procedures; computerized approaches.

451 Computer-Aided Geometric and Solid Modeling (3 cr.)

Two class periods and one three-hour lab period. Prerequisite: Senior standing, MENG 215 and MENG 356. Offered in spring.

Introduction to CAD/CAM. CAD software and hardware. Geometric modeling. Types of curves and surfaces. Three-dimensional modeling. Data capturing techniques. Surface fitting techniques. Rapid prototyping techniques. Overview and utilization of typical interactive computer graphics package. Hands-on experience in using CAD software, 3D laser digitizing scanner, rapid prototyping machine, and other peripherals.

453 Finite Element Method and Applications in Design (3 cr.)

Two class-periods and one three-hour lab period. Prerequisite: MENG 355 and ENGR 313. Offered in fall.

Displacement approach for simple elements in structural mechanics. Generalization to three-dimensional elements. Overview of the finite element method (FEM), variational principles, transformation, assembly, boundary conditions, solutions, convergence and stability. Isoparametric elements. Applications to solid mechanics, heat conduction and coupled problems. Pre- and post processing. Integration of FEM in Computer Aided Design.

454 Finite Element Method in Dynamic Analysis and Design (3 cr.)

Prerequisite: MENG 453. Offered occasionally.

Finite element formulation of eigen problems and initial value problems in one- and multi-dimensions; model, harmonic and transient response; applications in mechanical engineering.

455 Design of Engineering Systems (3 cr.)

Prerequisite: MENG 356. Offered in occasional.

Elements of system architecture, product versus process-driven design objectives, design of systems, synthesis and analysis in systems design, case studies.

457 Mechanical Design II (3 cr.)

Prerequisite: MENG 356 and 372. Offered in fall and spring.

Design of machine elements used in power transmission: gears, bearings, roller chain drives, clutches. Design for surface failure prevention. Applications: automotive and machine tool areas, etc. Basics of systems design. Design projects. Two class periods and one three-hour design and analysis session.

458 Integrated Design (3 cr.)

Prerequisites: MENG 339 and 356. Offered in fall.

The engineering design environment. Design and manufacturing. Design pitfalls and their early identification. Design measures for improving the maintainability, reliability and environmental impact. Implementation of the principle of redundancy. Introduction to design optimization.

466 Heat Transfer (4 cr.)

Three class periods and one three-hour laboratory period. Prerequisites: ENGR 313 and MENG 362. Offered in fall and spring.

Steady and unsteady, one and multi-dimensional, heat conduction. Finite-difference and Finite-volume methods applied to heat conduction. Heat transfer by natural and forced convection. Heat transfer by radiation. Design of Heat exchangers.

475 Applied Vibration Measurements, Analysis and Control (3 cr.)

Two class periods and one three-hour laboratory period. Prerequisite: Senior standing, ENGR 313. Offered in fall.

Introduction to mechanical vibrations, elements of vibration measuring systems, vibrations-severity measurements, frequency analysis of mechanical vibration; measuring systems for frequency analysis, single- and multi-degrees of freedom vibrating systems, applications of vibration measurements in condition monitoring and diagnostics, fault detection in rotating equipment; vibration control.

476 Automatic Control Systems (3 cr.)

Prerequisite: Senior standing, PHYS 215 and ENGR 313. Offered in spring.

Modeling of mechanical, pneumatic, electrical, and hydraulic systems. Feedback control system analysis and synthesis, transfer functions and stability analysis using Laplace transforms, time and frequency domain performance criteria, design techniques, state space controllers, introduction to sampled data control systems.

477 Robotics: Design, Analysis and Control (3 cr.)

Prerequisite: MENG 372. Offered occasionally.

Robot specifications, coordinate frames, direct and inverse kinematics, trajectory

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planning, manipulator Jacobian, Lagrange-Euler dynamic model, state equations, robot control.

480 Special Problems in Engineering (1-3 cr.)

Prerequisite: approval of department chair. Offered in fall and spring.

Independent study in various problem areas of engineering may be assigned to individual students or to groups. Readings assigned and frequent consultations held. May be repeated for credit if content changes.

490 Senior Project I (1 cr.)

Prerequisite: senior standing and completion of all ENGR courses in addition to a minimum of 18 credits of MENG courses. Offered in fall and spring.

A capstone project. Topics are selected by groups of students according to their area of interest and the advisors' approval. Projects address solutions to open ended applications using an integrated engineering approach. Participants give an oral presentation of the main results achieved. After criticism and suggestions, they submit a written report.

491 Senior Project II (2 cr.)

Prerequisite: MENG 490. Offered in fall and spring.

Participating students continue the work on the project topic selected in MENG 490. Participants give an oral presentation of the main results achieved. After criticism and suggestions, they submit a written report.

492 Selected Topics in Mechanical Engineering (3 cr.)

Prerequisite: senior standing. Offered occasionally.

Specialized topics in mechanical engineering will be discussed, e.g. energy conversion and transmission, nuclear engineering, computer applications in mechanical engineering, composite materials, corrosion, and protection.

494 Selected Topics in Design (3 cr.)

Prerequisite: senior standing in mechanical engineering. Offered in spring.

Specialized topics in design will be discussed, e.g. advanced strength of materials, power-plant analysis and design, design of manufacturing aids, materials-handling equipment, microcomputers in control, fluid machinery and power systems, finite-elements method in engineering, etc.

497 Industrial Training (1 cr.)

Prerequisite: Senior standing and completion of all ENGR courses in addition to a minimum of 18 credits of MENG courses. Offered in fall.

Each student is required to spend a minimum of eight weeks in industrial training in Egypt or abroad. A complete account of the experience is reported, presented and evaluated.

Middle East Politics

Minor - See Political Science

MIDDLE EAST STUDIES

School of Humanities and Social Sciences

Director: Bahgat Korany

Middle East Studies is an interdisciplinary program. Its policy is set by an advisory committee to the Dean of the School of Humanities and Social Sciences, consisting of representatives of the departments of: Arabic Studies, Economics, Political Science, Sociology, Anthropology, Psychology and Egyptology, and the Arabic Language Institute. Middle East Studies courses are taught by faculty members from Anthropology, Arabic Studies, Economics, History, Management, Political Science, and Sociology. Through intensive study of the region's history, culture, and current issues, students gain a comprehensive understanding of the modern Middle East. *See faculty listings under departmental descriptions.*

Bachelor of Arts

A total of 120 credits is required for the bachelor's degree in Middle East Studies:

*Core Curriculum (34 - 46 credits) **

Non-Arabic speaking students must take six hours of colloquial or literary Arabic.

Concentration Requirements (45 credits)

Apart from the Core requirements, students must take two courses from the 200 and 300-level courses in each of the following six field fields: Anthropology, Arab Studies, Economics, History, Political Science and Sociology. In addition, the student must take a total of three, 400-level courses selected from the above fields. The rest of the courses beyond the Core and Middle East Studies major must be advanced level courses, unless they are part of the requirements of a Minor.

In the case of ARBS and HIST courses, if the student takes one of the courses listed below as part of the Core requirements, the student must take another course from the Core courses listed under these fields.

200 and 300-level course requirements (36 credits)

ANTH	202	Cultural Anthropology, 3 cr.
	312	Peoples and Culture of the Middle East and North Africa, 3 cr.
ARBS	246	Survey of Arab History, 3 cr.
	343	Arab-Islamic Civilization in the Classic Age, 600-945 A.D., 3 cr.
	OR	
	336	Studies in Ibn Khaldun, 3 cr.

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ECON	201	Introduction to Economics, 3 cr.
	239	Economic History of the Modern Middle East, 3 cr.
HIST	355	History of the Modern Middle East, 1700-1900 A.D., 3 cr.
	356	History of Middle East in the Twentieth Century, 3 cr.
POLS	201	Introduction to Political Science, 3 cr.
	308	Comparative Politics of the Middle East, 3 cr.
ANTH/SOC	303	Social Movements, 3 cr.
	370	Environmental Issues in Development, 3 cr.

400-level course requirements (9 credits)

In addition to the above courses, students are required to take three 400-level courses from the following list:

ANTH	425	Women, Islam, and the State, 3 cr.
	450	Third World Development, 3 cr.
	OR	
	460	Development Studies Seminar, 3 cr.
ARBS	439	Islamic Law, 3 cr.
	451	Islamic Institutions, 3 cr.
	454	Modern Movements in Islam, 3 cr.
ECON	415	Economic Development in the Middle East, 3 cr.
	OR	
	460	Development Studies Seminar, 3 cr.
HIST	412	Special Topics in Modern Egyptian History, 3 cr.
	OR	
	462	Special Topics in Modern Middle East History, 3 cr.
POLS	420	Issues in Middle East Politics, 3 cr.
	423	Political Economy of North Africa, 3 cr.
	442	Environmental Politics, 3 cr.
SOC	450	Third World Development (same as ANTH 450), 3 cr.
	OR	
	460	Development Studies Seminar, 3 cr.

*Electives (29 -41 credits) ***

** Non-Arabic speaking students must take 6 credit-hours of colloquial or literary Arabic.*

*** Depending on the number of credit hours needed to complete the 120 stated above.*

Middle East Studies Courses (MEST)

400 Individual Study and Selected Readings (1-3 cr.)

Prerequisite: Consent of instructor and department on the basis of a well-defined proposal.

Guided reading, research, and discussion based on a subject of mutual interest to a student and faculty member.

430 Special Topics in Middle East Studies (3 cr.)

May be repeated for credit if content changes.

Selected topics to be investigated under the guidance of a faculty member, may be offered as a seminar.

Modern History

Major & Minor - See History

Modern Middle Eastern History

Minor - See History

MUSIC

Department of Performing and Visual Arts
School of Humanities and Social Sciences

Assistant Professor: J. Baboukis

Minor

Music is perhaps mankind's most highly developed form of interpersonal communication. All cultures and societies employ music in order to express praise to their deity and to socially relate to one another. The formal study of music enables the student to have a much more meaningful and profound understanding of the various ways music is created and enjoyed.

To acquire a Minor in Music, it is necessary to successfully complete 15 credit hours of instruction (normally five courses). The sequence of courses begin with MUSC 240. Independent study courses are only offered to music minors or other students majoring or minoring within the program of the Department of Performing and Visual Arts. Please note that MUSC 220 does not fulfill the requirements of the Music Minor.

Music Courses (MUSC)

220 Introduction to Music (3 cr.)

Does not count toward Music Minor. Offered in fall and spring.

An introduction to music and the role of all its participants including composers, performers, conductors, and audience.

240 Music Theory I (3 cr.)

Offered in fall and spring.

The science and philosophy of Western music theory, including scales, triads, forms, structure, harmony, counterpoint. Students need no musical background to enroll in this course which begins the sequence for those pursuing a minor in music.

260 History of Western Music I (3 cr.)

Prerequisites: MUSC 240 or consent of instructor. Usually offered once a year.

Greek, Medieval, Renaissance, and Baroque music. Includes instruments, forms, styles, and performance techniques.

261 History of Western Music II (3 cr.)

Prerequisites: MUSC 240 or consent of instructor. Usually offered once a year.

Classic, romantic, and twentieth-century music. Includes instruments, forms, styles, and performance techniques.

265/365/465 Rehearsal/Performance Practicum (1-3 cr.)

1 to 3 hrs. per semester in sophomore, junior, and senior years, up to a maximum of 6 credit hours, only 3 of which can be applied to the minor. Prerequisite: consent of music faculty. Offered in fall and spring.

A significant contribution to departmental concerts and recitals, Cairo Choral Society, Osiris singers, and Da Capo Early Music Consort. Those contributing music for theatrical productions should take credit under THTR 240/340/440.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

340 Music Theory II (3 cr.)

Prerequisite: MUSC 240, or consent of instructor. Usually offered once a year.

Continuation of the science and philosophy of music theory in further depth.

350 Comprehensive Musicianship I (3 cr.)

Prerequisites: MUSC 220, 240, or consent of music faculty. Music minors. Usually offered once a year.

Music through an active involvement in listening, analysis, performance, composition.

370 Selected Topics in Music (3 cr.)

Prerequisite: consent of the instructor. May be repeated for credit if content changes. Offered occasionally.

In-depth examination of specific topics in music determined by the special interests and expertise of the faculty.

402 Independent Study (1-3 cr.)

May be repeated for credit more than once if content changes. Open to students with a minimum B average. Offered in fall and spring.

In exceptional circumstances, some advanced music students may arrange, with departmental approval, to study beyond the regular course offerings.

450 Comprehensive Musicianship II (3 cr.)

Prerequisites: MUSC 220, 240, 350, or consent of the instructor. Music minors. Usually offered once a year.

Continuation in greater depth of the study of all aspects of music through an active involvement in listening, analysis, performance, and composition.

470 Advanced Seminar (3 cr.)

Prerequisite: Consent of the instructor. Offered occasionally.

In-depth examination of special advanced topics in music determined by the special interest and expertise of the faculty. Designed for advanced students.

PHILOSOPHY

Department of Philosophy
School of Humanities and Social Sciences

Professors: S. Stelzer (Chair), E. Wolf-Gazo

Associate Professors: W. Lammi, R. Switzer

Assistant Professors: G. Harman, A. Anderson, R. Fincham

The study of philosophy involves engaging in a process of coming to terms with oneself, and thus with one's place in the world. This requires a clear and careful thinking of a wide ranging sort, questioning assumptions and attitudes, analyzing problems thoroughly and seeking their solutions through sound reasoning and evidence. Some of the major concerns addressed by philosophy are: moral and socio-political values, the nature of knowledge, the relation of the mind to the body, the principles of the sciences, the arts, and religion. Philosophy aims, in addition, comprehensively to situate these subjects in terms of underlying questions about the meaning of existence and the nature of reality.

Bachelor of Arts

The philosophy major stresses a firm grounding in both the history and the disciplines of philosophy. It is strongly recommended that students majoring in Philosophy minor in another discipline and to explore other areas of study offered by the university. Thirty-nine credit hours of philosophy course-work are required for the major in philosophy. A total of 120 credit hours are required for the bachelor's degree in philosophy. Declared majors must enroll in a minimum of 6 credit hours of philosophy every semester. Exception to the 6 credit per semester minimum require written permission from the department.

To major in Philosophy, students must have taken PHIL 220 course with not less than a "B" grade. In addition, they must have a minimum of 2.4 overall GPA.

Core Curriculum (34 - 46 credits)

Required Courses (9 credits)

PHIL	312	Ancient Philosophy, 3 cr.
	314	Modern Philosophy, 3 cr.
	316	Contemporary Philosophy, 3 cr.

Area Electives (9 credits)

Two of the following:

PHIL	230	Introduction to Ethics, 3 cr.
	258	Political Philosophy, 3 cr.

PHIL	310	Philosophy of Art, 3 cr.
	318	Theory of Knowledge, 3 cr.
	402	Metaphysics, 3 cr.

One of the following:

PHIL	418	Philosophical Masterpieces, 3 cr.
	420	Philosophical Figures, 3 cr.

Electives in Philosophy (21 credits)

Any seven courses in philosophy excluding PHIL 220 (Critical Thinking).

Electives (35 - 47 credits)

Minor

The minor in philosophy introduces the student to the specific forms of philosophic questioning and to philosophic methods and modes of thought. It offers an opportunity for students to learn about the unique contribution philosophical traditions have made to civilization; moreover the minor shows students the close relationship philosophy has with the social sciences, the arts, and the natural sciences.

Requirements (15 credits):

Any five philosophy courses, exclusive of PHIL 220, selected in consultation with a member of the philosophy faculty. PHIL 220 is prerequisite for all philosophy courses except PHIL 221.

All 300-level philosophy courses and above may fulfill the humanities requirements.

Philosophy Courses (PHIL)

220 Critical Thinking (core curriculum requirement) (3 cr.)

Offered in fall and spring.

This course uses the discipline of philosophy to develop students' ability to think critically. Critical thinking allows us to enter skilfully into a given point of view, absorb it sympathetically, decipher its connections with other ideas and positions, extract its consequences, and evaluate its strengths and weaknesses. This ability is developed through readings, discussions, and writing assignments that seek to enlarge student awareness of crucial matters of human existence, such as justice, obligation, and personal responsibility. Topics will be explored using "eminent texts", texts which have proven more durable than the spirit of any particular age, and which present contrasting perspectives thoughtfully and in depth.

221 Informal Logic (3 cr.)

Offered in alternate years.

Informal logic aims to analyze and improve argumentation and reasoning as they

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occur in everyday life, to identify logical fallacies, and to critically examine common techniques of persuasion. The course examines logically valid forms and rules of inference, introduces deductive and inductive methods in ancient and modern logic, and elaborates the nature of definitions, categories and judgments.

224 Self and Society (3 cr.)

Offered in alternate years.

What is self? What do we mean by 'consciousness' or 'personal identity'? Is the self a social being, or is it an entity within society that stands apart from it? Through selected readings drawn from the meeting-points and confrontations between philosophy and fields such as psychology, anthropology and sociology, this course investigates the nature of the self and its place within that plurality of selves we call society.

226 Philosophy of Religion (3 cr.)

Offered occasionally.

Many religions include an intellectual and theoretical component that can be investigated independently of the religion itself. This course examines and clarifies some themes that arise from the rational investigation of the intellectual component of religion. Topics may include: reason and religious belief, proofs of the existence of God, the nature of religious language, the problem of evil, mysticism as a form of knowledge, and theological paradoxes (omnipotence, omniscience and free will, etc.)

230 Introduction of Ethics (3 cr.)

Offered in alternate years.

This course introduces moral philosophy, the attempt to provide systematic explanations of standards for human conduct. Can we determine what the right thing is for us to do? How should society set its normative rules? How is a normative discourse possible? Selected texts provide the relevant context in which these questions will be examined.

258 Political Philosophy (3 cr.)

Offered in alternate years.

What is the justification of state power and legal authority? What is a good political system? How do we relate our judgments about how the political world should be to the way it actually is at present? This course will examine such questions, which will involve a study of the genesis and structure of political entities and the mutual responsibilities of citizen and government.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

310 Philosophy and Art (3 cr.)

Offered in alternate years.

The course introduces the theme of beauty and issues of aesthetic value. Examples are drawn from areas such as literature, music, the plastic arts, and architecture.

312 Ancient Philosophy (3 cr.)

Prerequisite: Two philosophy courses or consent of instructor. Offered every year. This course explores some philosophical systems and issues characteristic of the earliest period of philosophy, especially fourth-century BCE Greece. Typical figures discussed might include: Thales, Anaxagoras, Heraclitus, Empedocles, Parmenides, Plato and Aristotle; and also later figures from the Stoic, Epicurean and Neoplatonic traditions. Topics may include: early natural philosophy, the riddle of non-being, theories of intelligible form, the good life theories of knowledge, and the nature of the human soul.

313 Mediaeval Philosophy (3 cr.)

Prerequisite: Two philosophy courses or consent of instructor. Offered every year. This course explores some philosophical systems and issues characteristic of the period commonly called the "Middle Ages", from 500 CE to 1500 CE. Typical figures discussed might include: Augustine, Boethius, al-Farabi, Ibn Sina, Anselm, Maimonides, Ibn Rushd, Aquinas, Al-Ghazali, John Duns Scotus, William Ockham, and Suarez. Topics may include: reason and faith, divine command ethics, truth and meaning, theories of human nature, occasionalism, virtues and the soul, the problem of universals, free will, and illumination and knowledge.

314 Modern Philosophy (3 cr.)

Prerequisite: Two philosophy courses or consent of instructor. Offered every year. Philosophical progress played an essential role in the historical changes of the Enlightenment and the movement of industrial society. This course focuses on some of the major schools and figures of Modern thought, which include Rationalists such as Descartes and Leibnitz, Empiricists such as Locke and Hume, and/or pivotal thinkers such as Bacon, Rousseau, Hegel, Kant, and Marx.

316 Contemporary Philosophy (3 cr.)

Prerequisite: Two philosophy courses or consent of instructor. Offered every year. The twentieth century has been marked above all by a focus on issues of language and the constitution of meaning. This course will examine representative thinkers drawn from one or both of the traditions of analytic and continental philosophy.

318 Theory of Knowledge (3 cr.)

Prerequisite: Two philosophy courses or consent of instructor. Offered in alternate years. What is the nature of knowledge? How can we know? How is science possible? Is knowledge innate or acquired? These are some of the questions that are examined in the context of selected classical as well as contemporary texts.

319 Development and Responsibility (3 cr.)

Offered in alternate years.

Western Civilization has gone to great lengths to 'develop' the 'underdeveloped

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world'. This course is a critical review of practices and goals of international development. By concentrating on ethical considerations within the various relevant fields, such as business, engineering and environmental protection, the students explore the mutual responsibilities in this cooperative enterprise.

330 Advanced Ethics (3 cr.)

Offered in alternate years. Prerequisite: PHIL 230.

This course will explore the theoretical underpinnings of ethical judgments and behavior. It will involve a more complex set of reading than the Introduction to Ethics and apply ethical theories to particular issues.

344 Literature and Philosophy: Selected Topics (3 cr.)

Same as ECLT 344. May be repeated for credit if content changes. Offered occasionally. The course concentrates on the intersection of the literary mode with the philosophical quest in Eastern and Western writing. Students are trained to analyze philosophical myths, tales, poems and dialogues as well as grasp the symbolic structures and expository techniques of philosophers.

354 Islamic Philosophy (3 cr.)

Same as ARBS 354. Prerequisite: ARBS/HIST 246 or ARBS/HIST 343 or consent of instructor. Offered occasionally.

A survey of the rational and spiritual dimensions of Arab-Islamic civilization as shown in the thought and ideas of major theologians, philosophers, and mystics.

356 American Philosophy (3 cr.)

Offered occasionally.

The course examines philosophy in North America, focusing on the central themes of democracy and pragmatism. A guiding question of the course will be: How is the democratic process embedded in the philosophic enterprise? The views of major thinkers such as Peirce, James, Royce, Santayana, Dewey, Quine, and Hartshorne will be examined.

360 Philosophy of Language and Communication (3 cr.)

Prerequisite: Two philosophy courses or consent of instructor. Offered in alternate years. Language is the basis of learning, understanding and communication. Therefore, a detailed study of language (oral, physical and written) is necessary for any true understanding of self and society. This course investigates such topics as the nature of sign systems, the problems of meaning, reference, sense and interpretation, the place of rhetoric and the methods of communicative practice.

362 Formal and Mathematical Logic (3 cr.)

Same as MATH 362. Prerequisites: PHIL 221 or MATH 200 or permission of the instructor. Offered occasionally.

This course is an introduction to the ideas and methods of mathematical logic. The basis of predicate calculus (first order logic) will be presented in some details. More advanced topics such as Goedel's completeness and incompleteness theorems, some of the

philosophico-mathematical problems in set theory and alternative logics will be discussed.

382 Philosophy of Science and Technology (3 cr.)

Offered in alternate years.

The relationship between science and technology has become a serious topic of debate. Is technology applied science or is science itself techno-science? Both have become pervasive facts which have altered human abilities and experiences of the world. This increase in power brings with it new responsibilities for the creators and users of science and technology. This course will explore these new powers and attendant obligations upon humanity, other cultures and the environment.

402 Metaphysics (3 cr.)

Offered occasionally.

This course deals with questions as to the ultimate reality of the world: Why is there something rather than nothing? Profound metaphysical questions posed by ancient, modern, and contemporary philosophers will be discussed. Issues may include Aristotle's Being qua Being, Leibniz' principle of sufficient reason, and Heidegger's analysis of Being.

403 Selected Topics in Philosophy (3 cr.)

May be repeated for credit if content changes. Prerequisite: One philosophy course on the 300-400 level or the permission of the instructor. Offered occasionally.

According to special interest of faculty and students.

418 Philosophical Masterpieces (3 cr.)

May be repeated for credit if the content changes. Prerequisite: One philosophy course on the 300 or 400 level or permission of the instructor. Offered in alternate years.

This course will be an in-depth study of a single great work of philosophy and its place in the history of ideas.

420 Philosophical Figures (3 cr.)

May be repeated for credit if content changes. Prerequisites: One philosophy course on the 300-400 level or the permission of the instructor. Offered in alternate years.

This course is an in-depth study of one great philosophical figure. It is an opportunity to explore the philosophy of the thinker as a whole concentrating on his/her place in the history of ideas and in history itself.

PHYSICS

Department of Physics
School of Sciences and Engineering

Professors: A. Abouelsaood, S. Arafa, F. Assabghy (Director of Science & Technology Research Center), M. Ghannam, H. Omar (Chair)

Associate Professors: A. El Fiqi (Vice President for Student Affairs), K. Rashid, S. Sedky, A. Shaarawi

The excitement of discovery can be experienced when we learn the value of Physics in solving practical problems and in gaining insight into everyday phenomena, and its significance as an achievement of the human intellect in its quest for understanding the world we all live in.

Physics has always attracted special students, challenged by modern theories that shaped and are still shaping our understanding of the universe like the theory of relativity, quantum mechanics, superconductivity and particle physics; just to name a few. A degree in Physics leaves one poised to enter many professions that include but are not limited to traditional physics. The discipline of Physics teaches skills that are transferable to many other professions, including electronics, computer and oil industries. These transferable skills include: mathematical modeling, problem solving, designing experiments, interpretation of experimental data, reflecting on answers before trusting them, research experience, laboratory techniques and communication skills.

Bachelor of Science

The undergraduate program in physics is designed to give students a thorough but flexible training in the fundamental aspects of classical and modern physics. Lecture material is reinforced and complemented by closely integrated laboratory work. The varied course offerings provide several options from which students may choose according to their interests and abilities.

A student who intends to major in physics must complete successfully PHYS 111, PHYS 123 L, PHYS 112, PHYS 124 L, MATH 131 and MATH 132 with a minimum GPA of 2.5 in these courses. To change from any other major to physics the student should have completed the above courses, in addition to an overall and concentration GPA's not less than 2.5.

A total of 132 credit hours is required for the bachelor's degree in physics distributed as follows:

Core Curriculum (30-42 credits)

The science requirement of the core curriculum electives is met within the physics concentration requirements.

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Concentration Requirements (43 credits)

PHYS	111	Classical Mechanics, Sound and Heat, 3 cr.
	112	Electricity and Magnetism, 3 cr.
	123L	General Physics Lab I, 1 cr.
	124L	General Physics Lab II, 1 cr.
	204L	Optics Laboratory, 1 cr.
	211	Introduction to Relativity & Nuclear Physics, 3 cr.
	212	Introduction to Quantum Mechanics, 3 cr.
	214	Waves, Optics and Atomic Physics, 3 cr.
	215	Introduction to Circuit Analysis and Devices, 3 cr.
	221L	Electronics Lab I, 2 cr.
	279	Computational Methods in Physics, 3 cr.
	311	Thermodynamics and Statistical Mechanics, 3 cr.
	312	Theoretical Mechanics, 3 cr.
	316	Electromagnetic Theory, 3 cr.
	321L	Nuclear Physics Lab, 1 cr.
	322L	Solid-State Physics Lab, 2 cr.
	323L	Semiconductor Technology Lab, 2 cr.
	325	Introduction to Solid-State Physics, 3 cr.

Concentration electives (21 credits):

To be taken from the 300 or 400 level courses in physics and mathematics. 500-level courses may be used towards the B.Sc. degree, upon the approval of the academic advisor.

General Electives (0-12 credits)

Collateral Requirements (23 credits)

CHEM	105	General Chemistry I, 3 cr.
	106	General Chemistry II, 3 cr.
	115L	General Chemistry Lab I, 1 cr.
	116L	General Chemistry Lab II, 1 cr.
CSCI	106	Fundamentals of Computer Science, 3 cr.
MATH	131	Calculus and Analytic Geometry I, 0 cr.
	132	Calculus and Analytic Geometry II, 3 cr.
	231	Calculus and Analytic Geometry III, 3 cr.
	232	Calculus and Analytic Geometry IV, 3 cr.
	233	Differential Equations, 3 cr.

Thesis Requirement (3 credits)

PHYS	301	Seminar in Physics, 1 cr.
	401	Senior Thesis, 2 cr.

In special cases, and with advisor's approval, another 400-level course may be substituted for the Senior Thesis and Seminar.

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Instrumentation option (21 - 27 credits)

Students may choose the instrumentation option within the bachelor's degree program by following the required sequence of courses listed below. While retaining the fundamentals of the conventional degree in physics, this option prepares students to meet the needs of an expanding and increasingly vital area of sciences and engineering.

The required courses for the Instrumentation option are:

PHYS	305L	Modern Sensors Laboratory, 1 cr.
	307L	Electronics Laboratory II, 1 cr.
	309L	Digital Logic Design Lab, 1 cr.
	315	Modern Sensors, 3 cr.
	319	Digital Logic Design, 3 cr.
	327	Operational Amplifiers and Applications, 3 cr.
	407L	Process Instrumentation and Digital Control Lab, 1 cr.
	417	Process Instrumentation, 3 cr.

and 5-11 credits selected from the following:

PHYS	314	Optical Systems and Instruments, 3 cr.
	318	Instrumentation Systems and Control, 3 cr.
	333	Introduction to Applied Geophysics, 3 cr.
	404L	Photonics and Optical Communication Laboratory, 1 cr.
	409L	Computerized Instrumentation Laboratory, 1 cr.
	413	Nuclear Physics, 3 cr.
	414	Photonics, 3 cr.
	415	Selected Topics, 3 cr.
	416	Experimental Methods in Undergraduate Research, 3 cr.
	426	Industrial Physics, 3 cr.
	427	Analytical Techniques in Instrumentation, 3 cr.
	429	Computerized Instrumentation, 3 cr.
CSCI	231	Computer Organization and Assembly Language Programming, 3 cr.

Concentration Electives (0-6 credits)

Minor

The minor in physics is designed to provide students majoring in science, computer science or engineering with the opportunity of complementing their major disciplines with a series of courses designed to provide in-depth appreciation of physics.

Requirements (17 credits)

PHYS	211	Introduction to Relativity and Nuclear Physics, 3 cr.
	212	Introduction to Quantum Mechanics, 3 cr.
	214	Waves, Optics and Atomic Physics, 3 cr.
	204L	Optics Laboratory, 1 cr.

and a minimum of 7 credits from the following:

PHYS	311	Thermodynamics and Statistical Mechanics, 3 cr.
	312	Theoretical Mechanics, 3 cr.
	316	Electromagnetic Theory, 3 cr.
	321L	Nuclear Physics Lab, 1 cr.
	322L	Solid-State Physics Lab, 2 cr.
	325	Introduction to Solid State Physics, 3 cr.
	413	Nuclear Physics, 3 cr.
	421	Quantum Mechanics, 3 cr.

Physics Courses (PHYS)

100 Physics for Poets (3 cr.)

No credit for Thannawia Amma Math/Science students, or equivalent, or students majoring in any of the departments of the School of Sciences and Engineering. Offered in fall and spring.

A conceptual overview of classical and modern physics. Mechanics, properties of matter, heat, sound, electricity and magnetism, light, atomic and nuclear physics, relativity theory.

111 Classical Mechanics, Sound and Heat (3 cr.)

Prerequisites: Thanawiya Amma Math or Science, or IGCSE O-level physics, or German Abitur, or French Baccalaureate, or International Baccalaureate, or PHYS 100. MATH 131 or concurrent enrollment. Concurrent enrollment with PHYS 123L. Offered in fall, spring and summer.

An introduction to classical mechanics covering vectors, applications of Newton's laws, conservation laws and forces, motion in a plane, circular motion, equilibrium and elasticity, rotational motion, simple harmonic motion, energy and power; mechanical and sound waves, temperature, heat and the first law of thermodynamics.

112 Electricity and Magnetism (3 cr.)

Prerequisites: PHYS 111, 123L, MATH 132 or concurrent. Concurrent with PHYS 124L. Offered in fall, spring and summer.

An introduction to electricity and magnetism covering the electric field, Gauss's law, electric potential, capacitance, dc circuits, magnetic fields, Faraday's and Ampere's laws, time-varying fields, Maxwell's equations in integral form and alternating currents.

123L General Physics Laboratory I (1 cr.)

One three-hour laboratory period. Concurrent with PHYS 111. Offered in fall, spring and summer.

The fundamental quantities of physics are measured through selected experiments in mechanics, heat, and sound. Data are summarized, errors are estimated, and reports are presented.

124L General Physics Laboratory II (1 cr.)

One three-hour laboratory period. Concurrent with PHYS 112. Offered in fall, spring and summer.

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The fundamental quantities of physics are measured through selected experiments in electricity, magnetism, and optics. Data are summarized, errors are estimated, and reports are presented.

199 Selected Topic for Core Curriculum (3 cr.)

Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

204L Optics Laboratory (1 cr.)

Prerequisite: PHYS 214 or concurrent. Offered in fall and spring.

Basic experiments in physical optics with special emphasis on laser optics.

211 Introduction to Relativity and Nuclear Physics (3 cr.)

Prerequisites: PHYS 112 and MATH 231 or concurrent. Offered in fall and spring.

Special theory of relativity: Lorentz transformations and relativistic dynamics.

Introduction to nuclear physics: nuclear properties, radioactivity and nuclear reactions.

212 Introduction to Quantum Mechanics (3 cr.)

Prerequisite: MATH 233 or concurrent. Offered in fall and spring.

Elements of quantum mechanics, particles and waves, the Schrödinger equation with simple applications, angular momentum, solution of the hydrogen atom.

214 Waves, Optics and Atomic Physics (3 cr.)

Prerequisites: PHYS 112 and 204L concurrent. Offered in fall and spring.

Wave phenomena; EM waves, geometrical and physical optics; atomic physics.

215 Introduction to Circuit Analysis and Devices (3 cr.)

Prerequisites: PHYS 112 and PHYS 221L concurrent. Offered in fall, spring and summer.

Foundation of circuit analysis, AC theory, introduction to semiconductor devices, amplifiers, feedback oscillators.

221L Electronics Laboratory I (2 cr.)

Prerequisite: concurrent with PHYS 215. Offered in fall, spring and summer.

Basic experiments in electronics.

279 Computational Methods in Physics (3 cr.)

Prerequisites: CSCI 106 and MATH 231. Offered in spring.

Two credits lectures and one credit computer lab.

Linear systems of equations and matrices; eigenvalues and eigenvectors; numerical errors; numerical solution of linear and nonlinear equations; curve fitting; numerical differentiation and integration; numerical solution of ordinary differential equations; applications in various fields of physics. MATLAB will mostly be used as a programming language in the weekly computer laboratory sessions.

301 Seminar in Physics (1 cr.)

May be taken more than once with the consent of the adviser. Prerequisite: junior standing. Offered in fall and spring.

Weekly one hour seminars in different areas of science and technology to be given by faculty or invited speakers from industries and other scientific communities.

305L Modern Sensors Laboratory (1 cr.)

Prerequisites: Concurrent with PHYS 315. Offered in fall.

Experiments in instrumentation illustrating material covered in PHYS 315.

307L Electronics Laboratory II (1 cr.)

Prerequisites: Concurrent with PHYS 327. Offered in spring.

Basic experiments in instrumentation electronics.

309L Digital Logic Design Laboratory (1 cr.)

Same as CSCI 239L and EENG 218L. Concurrent with PHYS 319. Offered in fall, spring and summer.

The laboratory will cover experiments in digital design and experiments illustrating material of course PHYS 319.

311 Thermodynamics and Statistical Mechanics (3 cr.)

Prerequisites: PHYS 112, MATH 233. Offered in spring.

A macroscopic and microscopic study of equilibrium thermal physics, fundamental laws of thermodynamics, and statistical mechanics applied to various systems.

312 Theoretical Mechanics (3 cr.)

Prerequisites: PHYS 212, MATH 233. Offered in fall.

Vector and tensor analysis, statics, kinematics, and dynamics of a particle and system of particles, rigid and deformable bodies; rotating coordinate systems, Lagrange's and Hamilton's equations with applications.

314 Optical Systems and Instruments (3 cr.)

Prerequisites: PHYS 204L, PHYS 214. Offered in spring.

Optical instruments: Monochromators; diffraction gratings.

Interferometers: Michelson, Mach-Zehnder, Fabry-Perot and Sagnac interferometers.

Geometric optics: generalized paraxial formulas, matrix formalism of Gaussian optics. Imaging properties of lens systems: lens combination, diffraction effects, diffraction-limited lenses and Gaussian beam optics.

Optical fiber sensors: Grating, polarization and intensity-based sensors; magnetic, strain, position, temperature and gas flow sensors.

315 Modern Sensors (3 cr.)

Prerequisite: PHYS 215, PHYS 221L. Concurrent with PHYS 305L. Offered in fall.

Physical principles of sensing, sensors characteristics, micro-fabrication technology,

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theory of operation of the following sensors: Infrared sensors, acceleration and angular rate sensors, occupancy and motion detectors, pressure sensors, flow sensors, radiation detectors, error analysis of experimental data and design of experiments.

316 Electromagnetic Theory (3 cr.)

Same as EENG 341. Prerequisites: PHYS 112, MATH 232. Offered in spring.

Electric field and potential. Gauss's law; divergence. Conductors, dielectrics and capacitance. Poisson's and Laplace's equations. Electrostatic analogs. Magnetic field and vector potential. Time varying fields; displacement current. Maxwell's equations in differential form.

318 Instrumentation Systems and Control (3 cr.)

Prerequisites: MATH 233. Offered in fall.

Linearity, Laplace transform, step and impulse response, block diagrams, signal graphs, state variables, feedback control, transfer functions of system components, criteria for design, stability analysis, Nyquist and Routh criteria, root locus method.

319 Digital Logic Design (3 cr.)

Same as CSCI 230 and EENG 210. Prerequisites: CSCI 106. Concurrent with PHYS 309L. Offered in fall, spring and summer.

The nature of digital logic and numbering systems. Boolean algebra, Karnaugh map, decision-making elements, memory elements, latches, flip-flops, design of combinational and sequential circuits, integrated circuits and logic families, shift registers, counters and combinational circuits, adders, subtracters, multiplication and division circuits, memory types. Exposure to logic design automation software.

321L Nuclear Physics Lab (1 cr.)

Prerequisite: PHYS 211 or concurrent. Offered in fall and spring.

Experiments in atomic and nuclear physics.

322L Solid-State Physics Lab (2 cr.)

Prerequisite: PHYS 325. Offered in fall and spring.

Experiments in solid-state physics and semiconductor devices.

323L Semiconductor Technology Lab (1 cr.)

Prerequisite: PHYS 215 and 221L. Offered in fall and spring.

Experiments in semiconductor and electronics technology.

325 Introduction to Solid-State Physics (3 cr.)

Prerequisite: PHYS 212. Offered in spring.

Classification of materials and their structural characteristics, symmetry and properties of materials, free-electron theory, band theory, dielectric processes, optical processes in material.

327 Operational Amplifiers and Applications (3 cr.)

Prerequisite: PHYS 215. Concurrent with PHYS 307L. Offered in spring.

Differential amplifiers, operational amplifiers, open-loop characteristics, inverting and noninverting amplifiers, comparators, signal generators, op amps with diodes, differential instrumentation and bridge amplifiers, bias, offsets and drift, band width, slew rate noise and frequency compensation, active filters, IC timers, power supplies and power amplifiers.

333 Introduction to Applied Geophysics (3 cr.)

Prerequisite: PHYS 214 and 315 or concurrent. Offered in spring.

Introduction to dynamic Earth; magnetic and gravimetric (potential), geoelectric and seismic methods to determine the physical properties, structure and dynamics of the Earth; seismic instruments and sources.

401 Senior Thesis (2 cr.)

Prerequisite: PHYS 301, Senior standing. Offered in fall and spring.

Methods used in obtaining and reporting the results of research. Each student selects a topic in his/her field of interest under the supervision of a faculty member, prepares an outline, assembles a bibliography, and makes a study plan to be followed in preparing his project. After finishing the project, each participant then makes an oral presentation of his/her chosen topic. A written thesis has to be completed after criticism and suggestions.

402 Independent Study (1-3 cr.)

Prerequisites: consent of the instructor, senior standing.

In exceptional circumstances some senior physics students, with departmental approval, may arrange to study a selected topic outside of the regular course offerings. The student and faculty member will select a topic of mutual interest and the student will be guided in research and readings. The student would demonstrate achievement either by submitting a report or passing an examination, according to the decision of the supervisor. May be repeated for credit more than once if contents change.

404L Photonics and Optical Communication Laboratory (1 cr.)

Prerequisites: PHYS 204L or consent of instructor. Offered in fall.

Experiments in fiber optics illustrating concepts pertaining to fiber dispersion, attenuation measurements, characterization of light sources (LEDs and laser diodes) and detectors (photodiodes), optical multiplexing and de-multiplexing, optical and interferometric sensors.

407L Process Instrumentation and Digital Control Laboratory (1 cr.)

Prerequisite: PHYS 417 or concurrent or consent of instructor. Offered in spring.

Experiments on process measurement, digital process control and programmable logic controllers.

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409L Computerized Instrumentation Laboratory (1 cr.)

Prerequisites: Concurrent with PHYS 429. Offered in spring.

Experiments in computerized instruments illustrating material covered in PHYS 429.

412 Semiconductor Physics (3 cr.)

Prerequisite: PHYS 325. Offered in fall.

Fundamental theory and characteristics of elemental and compound semiconductors. Semiconductor technology. P-N junctions and transistors.

413 Nuclear Physics (3 cr.)

Prerequisites: PHYS 211, 212 and 421 (recommended). Offered in fall.

Nuclear Structure and Nuclear Properties; Nuclear models; deuteron, liquid drop model, shell model; hyperfine structure. Nuclear decay and radioactivity. Nuclear reactions; Nuclear fission and fusion; reactors. Nuclear astrophysics. Nuclear medicine. Particle physics and fundamental interactions.

414 Photonics (3 cr.)

Prerequisites: PHYS 214 or consent of instructor. Offered in fall.

Light sources and transmitters, receivers, laser diodes, LEDs and photodiodes. Electromagnetic mode theory for optical propagation. Optical fiber measurements: fiber materials, multimode fibers, single-mode fibers. Fabrication, cabling, connectors and couplers. Optical amplifiers, Erbium-Doped fiber amplifiers. Modulation of light, multiplexing and de-multiplexing, fiber networking.

415 Selected Topics in Physics (3 cr.)

Prerequisite: Junior standing or consent of instructor. Offered occasionally.

Topics chosen according to special interest, such as temperature physics, vacuum physics, solid-state electronics, electronics and communications. May be repeated for credit more than once if content changes.

416 Experimental Methods in Undergraduate Research (3 cr.)

Prerequisites: Junior standing. Consent of instructor. Offered in fall and spring.

Experimental techniques for studying thermal, optical, magnetic and electric properties of matter. Low temperature physics: gas liquefaction, storage of liquefied gases, cryostats for low temperature studies, applied cryogenics.

417 Process Instrumentation (3 cr.)

Prerequisites: PHYS 215. Offered in spring.

Basic concepts in process measurement and control; process controllers; Final control devices; Typical applications; Programmable logic controllers; Distributed control systems; Process safety and alarming.

421 Quantum Mechanics (3 cr.)

Prerequisite: PHYS 212. Offered in spring.

Schrödinger equation, perturbation theory, Pauli theory of spin, angular momentum, motion of electrons in applied and periodic fields, complex atoms, bonds and valence, applications to solids. For those requiring additional background in quantum mechanics.

426 Industrial Physics (3 cr.)

Prerequisites: Junior standing. Consent of instructor. Offered in spring.

Vacuum technology, pumps, manometers and gauges. Application of vacuum technology in research and industry. Handling of industrial gases; gas separation, purification and gas analysis; physics in industry, sensors in industrial environments. Students field trips to several factories and manufacturing firms.

427 Analytical Techniques in Instrumentation (3 cr: 2 cr. lecture, 1 cr. lab)

Prerequisites: PHYS 215 and 221L. Offered in fall.

UV and visible light absorption instruments, nuclear magnetic resonance instruments, electron-spin resonance spectroscopy; x-ray instruments; atomic absorption spectrometry (a case study), thermal analysis, gas chromatography, infrared spectroscopy, electron microscopy. Lab activities include: conducting experiments using analog recorders and data acquisition systems, methods to upgrade old analog instruments, in addition to student projects in the area of instrumentation.

429 Computerized Instrumentation (3 cr.)

Prerequisites: PHYS 319 or consent of instructor. Concurrent with PHYS 409L. Offered in spring.

Microcomputer architecture and operation. Programming: assembly versus high-level languages. Interfacing: polling, interrupts, direct memory access. Use of PLD's, PALASM language. Standard Interface: RS 232; IEEE-488 (HPIB). System design and testing: top down design, bottom-up testing. Digital signal processing: A/D conversion; sample and hold devices.

Political Economy

Minor - See Political Science

POLITICAL SCIENCE

Department of Political Science
School of Humanities and Social Sciences

Professors: E. Hill, I. Ivekovic, W. Kazziha (Chair), B. Korany, E. Sullivan (Provost), D. Tschirgi, N. Farah, E. Montasser

Associate Professors: I. El Nur, E. Shahin, S. El-Musa

Assistant Professors: M. Kassem, V. Yadav, C. Davidson, M. Thakur, R. El Mahdi, M. Lattanzi, S. Khan, T. El Barghouti

Political Science is the systematic study of structures and processes pertaining to governing, policy making, and political life. It concerns ideas about governing and political participation, about rights and duties of governors and governed. Political science includes the study of modern state, its historical evolution, variations in its present configurations, and relations between and among nations, including institutions that organize these relations. It seeks to understand relationships between politics, the economy and society. The scope of Political Science is local, national, regional, international, and global. The program at AUC includes major fields and subfields of Political Science, viz: Comparative Politics, Development, International Relations, Political Economy, Political Theory and Philosophy, and Public and International law. The Middle East, Africa, and the Third World generally are emphasized in the program. As extra curricular enhancement, the Political Science Department sponsors a Model Arab League each year in the Fall and a Model United Nations in the spring.

Bachelor of Arts

Political Science at AUC is taught as a humanistic discipline with the overall objectives of fostering understanding of the contemporary world and developing knowledge about, and an appreciation of, the complex mechanisms, authoritative structures, and the allocation of values, which characterize contemporary human communities. Political Science at AUC requires students to develop abilities of comprehension and analysis, and skills for oral and written presentations. The graduate of Political Science is thus well equipped for life in the modern world, and to follow those professions and lines of work that require independence of thought, initiative, creativity in solving problems, and continuing self development. AUC graduates of Political Science are presently found in business, journalism, research, analytic writing, and public contact work. They occupy positions in public, private, development agencies, the diplomatic service, governmental ministries and agencies, and university teaching. A significant number of past graduates have subsequently completed M.A. and Ph.D. degrees.

Students wishing to declare a major in Political Science must have taken POLS 201 or be registered in it. Students wishing to remain Political Science majors must take POLS/HIST 206 and a 300 level POLS course the following semester. Students wishing to transfer from another major after their sophomore year will be considered on a case by

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case basis. Junior-year (300-level) courses are required in four subfields and are prerequisite to the more advanced courses and seminars (400-level). Each semester a selection of 300 and 400 level courses and seminars is offered from which students may choose courses to complete the requirements of the major.

A total of 120 credits is required for the bachelor's degree in Political Science:

Core Curriculum (34-46 credits)

Political Science requirements (45 credits): 24 credits concentration plus 21 credits electives.

Collateral requirements: (6 or 9 credits)

General Electives: (20-35 credits)

For all Political Science students:

Political Science concentration requirements (24 credits)

POLS 201 Introduction to Political Science, 3 cr.

POLS/HIST 206 Global Politics in the Twentieth Century, 3 cr.

POLS 301 or 302 History of Political Theory, 3 cr.

308 Comparative Politics of the Middle East, 3 cr.

310 Introduction to Development, 3 cr.

320 International Relations, 3 cr.

350 Introduction to Political Economy, 3 cr.

471 International Law, 3 cr.

Collateral requirements

ECON 201 Introduction to Macroeconomics, 3 cr.

HIST One additional Modern History course, 3 cr.
(not to be taken as an independent study)

General Electives

Students may use 15 hours of elective credit to minor in a discipline of their choice.

Minoring is optional. Courses taken as collateral requirements may count towards the minor.

Students have the choice to use the 21 elective credits in Political Science (7 courses) to obtain BA in Political Science in:

1. General field in Political Science
2. Specialization in International Relations
3. Specialization in Middle East Politics
4. Specialization in Political Economy
5. Specialization in Public and International Law

Three courses are required for each specialization as specified below. Three of the four additional required Political Science elective courses may be used for a second specialization.

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1. Requirements for the General Political Science field:

Students must take seven Political Science courses, including four courses at the 400 level and one of the four must be a seminar.

Collateral Requirements (6 credits)

General Electives (23-35 credits)

Depending on the number core curriculum credits taken to make up 120 credits total.

2. Requirements for the Specialization in International Relations

To specialize in International Relations, Political Science majors must, as a minimum, take the following three courses:

Requirements:

POLS	409	International Organization, 3 cr.
	410 or 411	International Security or Contemporary Foreign Policies 3 cr.
	405	International Politics in the Middle East, 3 cr.

Options:

To further their understanding in this specialization, students have the option to take a number of *recommended* courses including:

POLS	414	Egyptian Foreign Policy, 3 cr.
	415	U.S. Foreign Policy, 3 cr.
	440	Special Topics in International Relations, 3 cr.

Collateral Requirements (9 credits)

ECON	201	Introduction to Macroeconomics, 3 cr.
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Two additional history courses chosen from among the following:

HIST	202	History of Modern American Civilization, 3 cr.
	308	Europe in the Age of Reason, 3 cr.
	401	Selected Topics in the History of the United States (when approved by POLS department), 3 cr.
	402	Selected Topics in European History (when approved by POLS department), 3 cr.
	356	History of the Middle East in the 20th Century, 3 cr.
	462	Selected Topics in the History of the Modern Middle East, 3 cr.

Electives (20-32 credits)

Depending upon the number of core curriculum credits taken.

3. Requirements for the Specialization in Middle East Politics

To specialize in Middle East Politics, Political Science majors must, as a minimum, take the following three courses:

POLS	354	Political and Social Thought in the Modern Arab World, 3 cr.
	420	Issues in Middle East Politics, 3 cr.
	413	International Financial Institutions, 3 cr.

To further their understanding in this specialization, students have the option to take a number of *recommended* courses including:

POLS	325	Government and Politics of Egypt, 3 cr.
	353	Muslim Political Thought, 3 cr.
	405	International Politics in the Middle East, 3 cr.
	414	Egyptian Foreign Policy, 3 cr.
	422	Seminar: Twentieth Century Egypt, 3 cr.
	423	Political Economy of North Africa, 3 cr.
	424	Political Economy of the Middle East, 3 cr.
	430	Seminar: Special Topics in Political Science (If topic is applicable to the ME), 3 cr.
ARBS	439	Islamic Law, 3 cr.
POLS	472	International Law in the Middle East, 3 cr.
	475	Egyptian Law, 3 cr.
	476	The Supreme Constitutional Court of Egypt, 3 cr.

Collateral Requirements (6 credits)

ECON 201 Introduction to Macroeconomics, 3 cr.
Modern Middle East History at 300 or 400 level, 3 cr.

General Electives (23-35 credits)

Depending on the number of core curriculum credits taken.

4. Requirements for the Specialization in Political Economy

To specialize in Political Economy, Political Science majors must, as a minimum, take the following three courses:

Requirements:

POLS	351	History and Theory of Political Economy, 3 cr.
	425	Global Political Economy, 3 cr.
	424	Political Economy of the Middle East, 3 cr.

Options:

To further their understanding in this specialization, students have the option to take a number of *recommended* courses including:

POLS	402	Special Topics in Development/Political Economy, 3 cr.
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POLS	413	International Financial Institutions, 3 cr.
	423	Political Economy of North Africa, 3 cr.
	442	Environmental Politics, 3 cr.

Collateral Requirements (6 credits)

ECON	201	Introduction to Macroeconomics, 3 cr.
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General Electives (23-35 credits)

Depending on the number of core curriculum credits taken.

5. Requirements for the Specialization in Public & International Law

To specialize in Public and International Law, Political Science majors must, as a minimum, take the following three courses:

Requirements:

POLS	472	International Law in the Middle East, 3 cr.
	475	Egyptian Law, 3 cr.
	476	Supreme Constitutional Court of Egypt, 3 cr.

Options:

To further their understanding in this specialization, students have the option to take a number of *recommended* courses including:

A number of Special Topics courses that are taught each academic year under course number POLS 473 (Special Topics in Public Law) and POLS 474 (Special Topics in International Law), and/or a choice of one course at the graduate level in the specialization International Human Rights Law-among which are included:

ARBS	439	Islamic Law, 3 cr.
IHRL	510	International Human Rights Law, 3 cr.
	511	Research and Writing for International Human Rights Law, 3 cr.
	512	Human Rights and the United Nations, 3 cr.
	513	The European and Inter-American Systems of Human Rights Protection, 3 cr.
	514	Human Rights in the Middle East and Africa, 3 cr.
	515	Comparative Constitutional Law and Human Rights, 3 cr.
	516	Economic, Social and Cultural Rights, 3 cr.
	517	The Protection of Vulnerable Groups-Women and Children, 3 cr.
	518	International Refugee Law, 3 cr.

Collateral Requirements (6 credits)

ECON 201 Introduction to Macroeconomics, 3 cr.

One additional Modern History course (not to be taken as an independent study).

General Electives (23-35 credits)

Depending upon number of core curriculum credits taken.

Minors for non-political science majors:

Political Science Minor

Requirements (15 credits): POLS 201 Introduction to Political Science and **four** additional Political Science courses at the 300 or 400 level.

International Relations Minor

POLS 201 Introduction to Political Science, 3 cr.

POLS/HIST 206 Global Politics in the Twentieth Century, 3 cr.

POLS 320 International Relations, 3 cr.

Plus **two** courses chosen from:

POLS 405 International Politics in the Middle East, 3 cr.

409 Seminar: International Organization, 3 cr.

411 Contemporary Foreign Policies, 3 cr.

413 International Financial Institutions, 3 cr.

430 Seminar: Special Topics in Political Science, 3 cr.

(If the special topic is in the field of international relations)

440 Special Topics in International Relations, 3 cr.

471 International Law, 3 cr.

Middle East Politics Minor

The minor in Middle East politics is open to students majoring in disciplines other than political science. It requires successful completion of five courses selected from the following, which may be taken with the consent of the instructor:

*Requirements**

POLS 308 Comparative Politics of the Middle East, 3 cr.

and **four** courses selected from the following:

POLS 325 Government and Politics of Egypt, 3 cr.

POLS/ARBS 353 Muslim Political Thought, 3 cr.

POLS 354 Political and Social Thought in the Modern Arab World, 3 cr.

POLS 405 International Politics in the Middle East, 3 cr.

420 Issues in Middle East Politics, 3 cr.

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POLS	422	Seminar: Twentieth-Century Egypt, 3 cr.
	430	Seminar: Special Topics (Whenever content is relevant. May be taken more than once for credit if content changes), 3 cr.
	432	Seminar: Comparative Politics and/or Policies (Whenever content is relevant), 3 cr.

** POLS 201 is prerequisite to all POLS courses, except that the requirement that POLS 320 be taken as a prerequisite for POLS 405 may be waived for minors with the consent of the instructor.*

Political Economy Minor

The minor in Political Economy is open to students majoring in disciplines other than Political Science. It requires successful completion of :

POLS	201*	Introduction to Political Science, 3 cr.
	350	Introduction to Political Economy, 3 cr.
	351	Theory and History of Political Economy, 3 cr.
	425	Global Political Economy, 3 cr.

Two other courses from the following:

POLS	402	Seminar: Special Topics in Development/Political Economy, 3 cr.
	413	International Financial Institutions, 3 cr.
	423	Political Economy of North Africa, 3 cr.
	424	Political Economy of the Middle East, 3 cr.
	442	Environmental Politics, 3 cr.

*POLS 201 is a prerequisite for all Political Science courses

Political Science Courses (POLS)

201 Introduction to Political Science (3 cr.)

Prerequisite: ECLT 102. Offered in fall and spring.

Methods of study and the nature of political phenomena; terminology and conceptual tools; origins, forms, and historical development of political organization; political institutions and functions; comparison of modern forms of political organization at the national, local, and international levels.

206 Global Politics in the Twentieth Century (3 cr.)

Same as HIST 206. Offered in fall and spring.

The major political developments and socioeconomic changes, treated chronologi-

cally and geographically, from the origins of the First World War to the present.

301-302 History of Political Theory (3 cr. per semester)

Prerequisites: POLS 201 is prerequisite for POLS 301-302. POLS 302 is not offered in the fall semester.

Analysis of the thought of the major contributors, from Plato to the present. Fall semester (301): ancient and medieval political philosophy and the modern break with traditions. Spring semester (302): main currents of modern thought.

303 American Government and Politics (3 cr.)

Prerequisites: POLS 201 and junior standing. Offered occasionally.

Formation and implementation of public policy, with attention to the structure, powers, and functions of the presidency, the bureaucracy, the Congress, and the federal courts and the forces that influence their actions.

304 Bureaucracy and Development (3 cr.)

Same as SOC 304. Prerequisites: 6 hours of social sciences or consent of instructor. Offered in alternate years.

Relationship between the character of formal organizations and the unfolding of socio-political processes. Importance of bureaucratic forms of organization, advantages and problems of bureaucracy, pathologies of bureaucracy, bureaucratic behavior and corruption, alternatives to bureaucratic organization.

305 Politics and Society in Contemporary Africa (3 cr.)

Prerequisites: 6 hours of social science coursework. Offered occasionally.

Introduction to the social arena within which politics occurs and the political arena which helps to shape society in Africa today. Examines the impact of colonialism, African responses, nationalism, decolonization, independence, and contemporary Africa. Central themes include group identities and relations between societally based and state based authority structures, and the changing dynamics of state-society relations. The course topic is inherently interdisciplinary and students should be prepared to explore Africa through primary and secondary sources. No prior knowledge of Africa is expected.

308 Comparative Politics of the Middle East (3 cr.)

Prerequisite: POLS 201. Offered in fall and spring.

Comparative study of government and ideologies, social stratification, and institutions in the Middle East. Also includes a study of the problems of modernization and political development.

310 Introduction to Development (3 cr.)

Prerequisite: POLS 201. Offered in fall and spring.

Examines the major problems of development that are raised by classic social-science theorists such as Weber, Durkheim, Tocqueville, and Marx. Emphasis on the compatibilities and contradiction between aspects of social change and political integration.

320 International Relations (3 cr.)

Prerequisites: POLS 201 and 206. Offered in fall and spring.

The nature of politics among sovereign states: approaches and basic concepts, national power, the balance of power, nationalism and imperialism, instruments and goals of national policy, real or ideal limitation on international anarchy. Emphasis on international law and the United Nations, selected topics in contemporary international political history.

322 Comparative Government and Politics: Developed Systems (3 cr.)

Prerequisite: POLS 201. Offered in fall.

The government and politics of selected countries in the developed world (Western Europe, North America, Japan). Subjects covered may include the structural and functional characteristics of executive, legislative, and judicial institutions; bureaucracy, political parties, mass movements, political culture, the role of public opinion, foreign policy.

323 Comparative Government and Politics: Developing Systems (3 cr.)

Prerequisite: POLS 201. Offered in fall.

The government and politics of selected countries in the developing world (Middle East, Africa, Asia, Latin America). Subjects covered may include the structural and functional characteristics of executive, legislative, and judicial institutions; bureaucracy, political parties, mass movements, political culture, the role of public opinion, foreign policy.

324 Comparative Government and Politics in Contemporary Eastern Europe and Russia (3 cr.)

Prerequisite: POLS 201. Offered in spring.

The collapse of communism and post-communist political and economic developments. Transition to democracy and market economy. Ethnicity, nationalism and the emergence of nation states. Consideration of the government and politics of selected countries.

325 Government and Politics of Egypt (3 cr.)

Examination of structure and process of the Egyptian government and political life including: the executive, legislative and judicial institutions and their powers; the legislative process; executive policy making; electoral processes; parties and interest groups; and other selected aspects of the interaction between state and society.

350 Introduction to Political Economy (3 cr.)

Prerequisites: POLS 201 and ECON 201.

Analysis of interconnections between politics and economics, political authority and the market, power and wealth. Survey of main schools of thought in political economy, their evolution, convergence and divergence. Empirical issues essential to the understanding of the interaction between politics and economics in today's world will be included.

351 Theory and History of Political Economy (3 cr.)

Prerequisites: POLS 201 and ECON 201.

Traces the historical development of Political Economy. Major schools of thought are covered and related to the development of Capitalism.

353 Muslim Political Thought (3 cr.)

Same as ARBS 353. Prerequisite: HIST 246. Offered in fall and spring.

The development of political theory in Muslim civilization. Analysis of leading ideas of schools and individuals, source readings in Arabic or in translation.

354 Political and Social Thought in the Modern Arab World (3 cr.)

Offered in fall and spring.

Development of political and social ideologies in the Arab world since the beginning of the twentieth century. Topics will include the impact of liberal thought on Arab elites, the rise of nationalism, and the emergence of theories of political and social transformation.

402 Seminar: Special Topics in Development/Political Economy (3 cr.)

Prerequisite: POLS 310. Offered occasionally.

How the emerging global and domestic contexts affect the making of public policies, especially in the economic sectors: patterns of these policies in selected political systems; the changing role of the state and its priorities in the new global context; the impact of liberalization, democratization and the rise of new social groups.

405 International Politics in the Middle East (3 cr.)

Prerequisites: POLS 308 and 320.

This seminar seeks to examine the relationships of the Middle East to the great powers of our time, with emphasis on the political, military, economic and cultural impact of these powers on shaping the region, and its future.

409 Seminar: International Organization (3 cr.)

Prerequisite: POLS 320. Offered in spring.

This seminar examines the structure and evolution international organizations, both intergovernmental (IO's) and non-governmental (NGO's), with an emphasis on the United Nations system, its specialized agencies, and recent issues of global governance.

410 International Security (3 cr.)

Prerequisite: POLS 320.

Discusses the major theories of war and peace. Encompasses a study of international crisis, conflict, war, and strategies for managing conflicts. Covers critical security studies to understand the challenges of the assumptions underpinning traditional security studies. Diverse topics including environmental security, global human security, and international terrorism will be studied with a view of focusing on the changing nature of international security.

411 Contemporary Foreign Policies (3 cr.)

Prerequisite: POLS 320. Offered in fall.

300 POLITICAL SCIENCE / UNDERGRADUATE

The foreign-policy making processes and the fundamental policies of selected states in the contemporary world.

413 International Financial Institutions (3 cr.)

Prerequisites: ECON 201 and POLS 320.

The politics of international economics, focusing on the role of the IMF, World Bank, WTO, and other multinational institutions as well as regional financial and economic integration with emphasis on European Union and Middle East and Islamic finance and banking. Special attention will be given to the political dimensions of such issues as debt rescheduling, structural adjustment, international trade regulations, foreign aid, trade wars and embargoes.

414 Egyptian Foreign Policy (3 cr.)

Prerequisite: POLS 320.

Main themes of Egyptian foreign policy from 1952 including: Egypt's relations with the great powers; inter-Arab relationships and policy including unity experiments, the inter-Arab arena including the Arab League, and the Gulf Cooperation Council; effects on foreign policy of the Arab-Israeli conflict; relations with the Non-Aligned Movement, the Islamic Conference, the Organization of African Unity; policy concerns of the national interest including Nile waters and the Suez Canal.

415 U.S. Foreign Policy (3 cr.)

Prerequisite: POLS 320.

Examines major issues and processes of U.S. foreign policy considered historically focusing on the post World War II era. Processes of policy formulation and values manifested in U.S. foreign policy are explored in the context of specific issue areas such as the Cold War, the end of the Cold War, the Western Alliance, and development aid and assistance to Latin America, Africa, and Asia.

420 Issues in Middle East Politics (3 cr.)

Prerequisite: POLS 308. May be repeated for credit if content changes. Offered occasionally. Selected Topics in Middle East Politics investigated under the guidance of a faculty member. May be offered as a seminar.

422 Seminar: Twentieth-Century Egypt (3 cr.)

Prerequisite: POLS 308. Offered in fall.

The recent political history of Egypt as a case study of modernization with particular attention given to the twentieth century.

423 Political Economy of North Africa (3 cr.)

Prerequisite: POLS 350 or 308.

The interaction between politics and economics in the North African context including external and internal factors and state formation in these countries. Issues of development, relationship with Europe and regional integration.

424 Political Economy of the Middle East (3 cr.)

Prerequisite: POLS 350 or 308.

An examination of the interconnection between the socio-political forces and economic policies in the Middle East. For instance: how liberalization affects democratization and vice versa, how economic national characteristics affect the political process and vice versa. Required for all students in Political Economy Specialization.

425 Global Political Economy (3 cr.)

Prerequisite: POLS 320 and 350.

The dialectics of the relationship between market and state. Types of international actors and the international division of labor; old and new. Theory of international regimes and the evolution of mechanisms of international trade and finance. Transformation of the global political economy and its impact on patterns of hegemony/marginalization in the contemporary world.

426 Contemporary Political Islam (3 cr.)

This course is designed to provide an understanding of the phenomenon of political Islam in the Arab and Muslim worlds. It examines the reasons, implications, and consequences of the reassertion of Islam in today's politics. The course is divided into three parts. The first provides a thorough analysis of the main idea and model (s) that inspire contemporary Islamist activists. The second part critically examines the different trends within the Islamic movements and presents case studies of their origins, evolution, dynamics, and limitations. Finally, the course concludes with a critical analysis of the ideas of prominent Islamic thinkers that are considered as main ideologues of political Islam.

430 Seminar: Special Topics in Political Science (3 cr.)

May be repeated for credit if content changes. Prerequisite: 6 credit hrs at 300 level in POLS. Offered in fall and spring.

Selected topics to be investigated under the guidance of a faculty member. May be offered as a seminar.

431 Political Sociology (3 cr.)

Same as SOC 431. Prerequisites: 9 hours of social science courses, and junior or senior standing. Offered in fall.

Social bases of various political systems such as Western-type democracy, authoritarianism, and totalitarianism. Topics include: determinants of political behavior, power, elite formation, bureaucracy, and the political role of the military and intellectuals in Third World societies.

432 Seminar: Comparative Politics and/or Policies (3 cr.)

May be repeated for credit if content changes. Prerequisite: One of POLS 308, 322, 323, 324. Offered in fall and spring.

Selected topics in the field of comparative politics or policies, with concentration on a single country, problem, or policy.

302 POLITICAL SCIENCE / UNDERGRADUATE

433 Individual Study and Selected Reading (1-3 cr.)

Prerequisite: consent of instructor and department on the basis of a well-defined proposal. Offered in fall and spring.

Guided reading, research, and discussion based on a subject of mutual interest to a student and faculty member.

438 Modern China (3 cr.)

Offered occasionally.

An examination of the evolution of modern China's political system in the light of Chinese history. Areas for consideration will include the structure of Chinese political culture, how communism has served China, how China's past may continue to determine China's future. When there is sufficient interest, and such arrangements are possible, the course will include a two- to three- week trip to China.

439 Government and Politics in the Modern Caucasus and Central Asia (3 cr.)

Prerequisite: POLS 201.

The policy of colonization and the collapse of the Soviet multi ethnic empire. New nation states in the post communist era including their relations with the Middle East.

440 Seminar: Special Topics in International Relations (3 cr.)

May be repeated for credit if content changes. Prerequisite: POLS 320.

A special issue or theme in international relations investigated under the guidance of a faculty member.

442 Environmental Politics (3 cr.)

This course analyzes environmental politics in an international arena. It examines the policies and tactics of a range of actors, including national and local governments, non-governmental and intergovernmental organizations, corporations, mass movements and scientists.

455 Seminar in African Studies (3 cr.)

Same as SOC/ANTH 455. Prerequisite: Junior or Senior standing. Offered occasionally. Through the examination of a contemporary topic in African Studies, this interdisciplinary seminar examines epistemological and methodological issues in African Studies such as transformation, resistance, power, technology, and women and development. Original sources will be used to examine the theoretical assumptions, data, and methods underlying the literature. Prior course work in African Studies is recommended.

460 Development Studies Seminar (3 cr.)

Same as ANTH/ECON/SOC 460. Prerequisite: 12 hours of social science courses. Offered occasionally.

Interdisciplinary and comparative analysis of development as a process and as a historical phenomenon. Critical evaluation of economic, political, social, and cultural technological and managerial factors that structure developmental change.

471 International Law (3 cr.)

Prerequisite: POLS 320. Offered in fall.

Growth of the international law of peace and war, contemporary international law and practice, examination of international disputes from a legal perspective.

472 International Law in the Middle East (3 cr.)

Prerequisite: POLS 471.

Provides students with an in-depth understanding of international law by focusing specifically on issues relevant to the Middle East.

473 Special Topics in Public Law (3 cr.)

Same as POLS 573. May be taken a second time if content changes. Prerequisites: 6 credit hrs at 300 level in POLS.

Topics drawn from constitutional and administrative law, including related jurisprudence and judicial institutions.

474 Special Topics in Public International Law (3 cr.)

Same as POLS 574. May be taken if content changes. Prerequisite: POLS 471.

Specialized areas of international law, such as human rights and humanitarian law.

475 Egyptian Law (3 cr.)

The Egyptian legal system will be considered according to its present structure and historical development, including institutions, processes, laws, and the courts. This course may be counted towards the requirements of the Specializations in Public and International Law.

476 Supreme Constitutional Court of Egypt (3 cr.)

The Supreme Constitutional Court will be considered as to its place within the Egyptian judiciary and the significance of its decisions in political and economic development. This course may be counted towards the requirements of the Specialization in Public and International Law.

PSYCHOLOGY

Department of Sociology, Anthropology, Psychology and Egyptology
School of Humanities and Social Sciences

Professor Emeritus: O. Farrag

Associate Professor: K. Myambo

Assistant Professors: E. Coker, Y. Khallad, M. Whoolery

Psychology is the multifaceted scientific study of human behavior and mental processes. The program at AUC emphasizes physical, cognitive, emotional, personal, and social development from infancy to adulthood. This development is studied against a background of major theoretical and applied domains of psychology, concentrating on important aspects of individual, group, and cultural dynamics.

Bachelor of Arts

The aim of psychology at AUC is to provide students with a solid background in the current major areas of the discipline. It will give them insights which can be of personal as well as of practical value in many other occupations. In addition, the program will prepare students wishing to continue further studies leading to a professional career.

Students who intend to seek the Psychology degree must have taken Psyc 201 and have obtained a grade of "B" or higher. In addition, they must have taken Psyc 202 and Math 100 or be currently registered in Psyc 202 and Math 100. Overall GPA must be at least 2.5 for consideration. Based on the availability of space, a limited number of students who have successfully completed these requirements will be accepted in the major. The requirements for continuing in the major are that the student takes Psyc 207 and an additional course in psychology in the semester following their declaration, and registers for at least one psychology course every semester following their declaration.

A total of 120 credit hours is required for the bachelor's degree in psychology:

Core Curriculum (34-46 credits)

Students must take BIOL 100 Introductory Biology, or BIOL 104 Unity of Life for the science requirement.

Concentration Requirements (48 credits)

PSYC 201-202	General Psychology, 6 cr.
203	Developmental Psychology, 3 cr.
207	Basic Statistics for the Social Sciences, 3 cr.
208	Research Methods for Psychology, 3 cr.
301	Social Psychology, 3 cr.
308	Cognitive Psychology, 3 cr.

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PSYC 309	Physiological Psychology, 3 cr.
315	Assessment of Individual Differences, 3 cr.
327	Theories of Personality
342	Abnormal Psychology, 3 cr.
403	Contemporary Systems and Theory, 3 cr.

Two additional 300-level psychology courses

Two 400-level psychology courses (except PSYC 402)

Collateral Requirements (24 credits)

ANTH 202	Cultural Anthropology, 3 cr.
380	Fieldwork Methods, 3 cr.

SOC 201	Introduction to Sociology, 3 cr.
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Five additional courses to be approved by the adviser

Electives (2-14 credits)

Minor

The minor in psychology provides a general introduction to the field without the depth of methodological training required of majors.

Requirements (18 credits): PSYC 201-202 General Psychology, and four other psychology courses to be approved in consultation with the psychology faculty.

Psychology Courses (PSYC)

201 General Psychology (3 cr.)

Offered in fall and spring.

Survey of psychology including methods of study and the nature of psychological phenomena. Primary sources of behavior, development, sensation and perception, consciousness and thought, conditioning and learning, memory and language.

202 General Psychology (3 cr.)

Continuation of Psych 201. Prerequisite: PSYC 201. Offered in fall and spring.

Motivation, emotion, mental abilities, personality, conflict and stress, abnormal behavior, therapy techniques and social aspects of psychology.

203 Developmental Psychology (3 cr.)

Prerequisite: PSYC 201. Offered in fall and spring.

Child growth and behavior from conception to early childhood, with the major emphasis on current infant studies.

207 Basic Statistics for the Social Sciences (3 cr.)

Prerequisite: MATH 100. Offered in fall and spring.

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Basic statistical procedures used in social science research. Includes central tendency, variability, parametric and nonparametric techniques. Emphasis will be on conceptual understanding and practice.

208 Research Methods for Psychology (3 cr.)

Prerequisites: PSYC 201, 202, and 207. Offered in fall and spring.

Observational and experimental methods which form the empirical basis of contemporary psychology. Progresses from understanding the logic of scientific discovery and comprehension of research literature to the formulation, design, conduct, analysis, and reporting of specific research projects.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

301 Social Psychology (3 cr.)

Same as SOC 301. Prerequisites: PSYC 201 and 202. Offered in fall and spring.

The extension of general psychological principles and methods to the study of interaction with social and physical environment. The nature and methodology of research in social psychology. The major theoretical concepts and their applications and contributions to a variety of areas in the field including development and socialization, social perception and attribution of causality, attitude formation and changes, pro- and anti-social behavior, interpersonal attraction and intimacy, and the social effects and functions of groups.

303 Developmental Psychology: The Middle Years of Childhood (3 cr.)

Prerequisites: PSYC 202 and 203. Offered in alternate years.

Child growth and behavior from middle childhood to puberty. Emphasis will be on cross-cultural studies of children and on preparing students for practical and research work with school-age children from different settings.

304 Developmental Psychology: Adolescence (3 cr.)

Prerequisites: PSYC 203 and 303. Offered occasionally.

Examination of the rapidly changing life experiences of the adolescent within the context of changing societies. Emphasis is on the continuum of identity issues the adolescent faces and how she/he attempts to solve these within a cross-cultural context.

308 Cognitive Psychology (3 cr.)

Prerequisite: PSYC 208. Offered in fall.

Current research and theory concerning mental processing and mental structures. Emphasis on the processes of perceiving, learning, remembering, and thinking. The merits and limitations of studying these processes from an information-processing perspective.

309 Physiological Psychology (3 cr.)

Prerequisite: BIOL 100 or BIOL 104 and PSYC 208. Offered in spring.

Humans as mind-body systems. Methods, findings, and limitations of research aimed at discovering the physiological causes of psychological phenomena. Theoretical and practical import of contemporary research into the physiological correlates of complex psychological phenomena such as perception, consciousness, emotion, and disorders.

310 Psychology in the School (3 cr.)

Prerequisite: PSYC 201. Offered occasionally.

Psychological principles and research relevant to the classroom. School visits followed by discussion.

313 Learning and Behavioral Psychology (3 cr.)

Offered occasionally.

Reviews the fundamentals of the processes of learning, memory and conditioning, emphasizing both classical and operant conditioning in human and animal models. It is followed by an exploration of the techniques and theories of behavioral psychology in the applied setting.

315 Assessment of Individual Differences (3 cr.)

Prerequisites: PSYC 201, 202 and 207. Offered in spring.

Nature of individual differences, methods and rationale of their assessment, with emphasis upon widely used psychological tests of intellectual function and personality.

327 Theories of Personality (3 cr.)

Prerequisites: PSYC 201 and 202. Offered in fall and spring.

The study of the development and dynamics of personality from a variety of theoretical perspectives. The following theoretical viewpoints and theorists are studied: Psychoanalytic (Freud, Jung), Socio-cultural (Adler, Horney, Erikson), Trait (Allport, Cattell, Eysenck), Learning (Skinner, Dollard, Miller, Bandura, Mischel), Sociobiological (Wilson), and Existential-Humanistic (Kelly, Rogers, Maslow, May).

342 Abnormal Psychology (3 cr.)

Prerequisite: PSYC 201 and 202. Offered in fall and spring.

Different theoretical approaches and empirical studies of causes, symptoms, and treatment of abnormal patterns of behavior. Problems and advantages of creating a classification scheme for abnormal behavior. The major diagnostic categories and review of the more common patterns of abnormal behavior. How such disorders arise from subtle interactions between organic or psychological predispositions.

400 Selected Topics in Psychology (3 cr.)

May be repeated for credit if content changes. Prerequisite: junior or senior standing, and permission of the instructor. Offered in fall and spring.

Topics to be chosen according to specific interest, for example: learning theory, conflict and stress, psycholinguistics, ethnopsychology.

401 Cognitive Development Practicum (3 cr.)

Prerequisites: PSYC 202, 203, and permission of the instructor. Offered in fall.

The main theoretical approaches to child development with emphasis on concept

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formation. Students are placed in institutions for both normal and exceptional children to test theories and learn basic concept training skills.

402 Independent Study (3 cr.)

Prerequisites: a minimum B average, consent of the instructor, and approval by the Unit Head and the Department Chair. Offered in fall and spring.

In exceptional circumstances some seniors and graduating seniors with department approval may arrange for independent study on a chosen topic in Psychology that is not covered in the regular offerings for that academic year. Guided readings, research and frequent consultations held. May be repeated for credit if content changes.

403 Contemporary Systems and Theory (3 cr.)

Prerequisites: junior or senior standing and 15 hours of psychology courses, or permission of instructor. Offered in spring.

Places recent developments in psychology in a broad perspective. Emphasizes how new movements in psychology reflect both psychology's past and the influence of related fields such as the cognitive and neurosciences.

404 Environmental Psychology (3 cr.)

Prerequisites: Junior or senior standing, 12 hours of Psychology including PSYC 301 and consent of the instructor. Offered occasionally.

Consideration of a wide variety of person-environment interactions including how the environment is perceived, evaluated, and manipulated, how architectural design controls and constrains behavior, and the effects of human behavior on the nature and quality of the environment and people's adjustment and health. Basic research on behavioral effects of complex environmental conditions. Behavioral aspects of pollution, noise, and environmental stress.

405 Health Psychology (3 cr.)

Prerequisite: PSYC 342 or consent of the instructor. Offered occasionally.

The study of the biopsychosocial model of health and disease. Critical appraisal of the influence of psychological factors on health maintenance and promotion as well as the prevention and treatment of illness. Special focus on the role of psychological factors in the etiology and correlates of health, illness and dysfunction.

407 Psychological Anthropology (3 cr.)

Same as ANTH/SOC 407. Prerequisites: 6 hours of anthropology, 6 hours of psychology, and junior or senior standing. Offered in alternate years.

Interdisciplinary and cross-cultural approach to the study of the reciprocal relations of culture and personality; special focus on themes of identity, socialization, and the emergence of self in various cultural settings.

408 Practicum in Behavior Analysis (3 cr.)

May be repeated for credit if content changes. Prerequisites: senior standing and consent of instructor. Offered in spring.

Practical development, execution, and evaluation of a program dealing with a selected, limited behavioral topic or problem of particular relevance. Specific strategic, ethical, and pragmatic concerns are emphasized at the expense of theory and generality.

409 Sociology of Addiction (3 cr.)

Same as SOC 409. Prerequisites: nine hours of SOC/PSYC coursework and senior standing, or consent of the instructor. Offered occasionally.

An interdisciplinary social-psychological approach to the analysis and interpretation of the phenomenon of addiction in modern society. This course explores the role of social sciences in addressing the issue and the significance of social psychological explanations in theory, treatment and research on addiction. The student is required to participate in fieldwork and class presentations and do assigned readings.

410 Cross-Cultural Psychology (3 cr.)

Offered occasionally.

A review of research methods and findings in psychology from around the world, particularly emphasizing applied/clinical issues, the idiosyncrasies of the practice of psychology in various cultures, the impact of different childrearing and family practices on psychological health and development across cultures, and emerging issues in world mental health and international applied psychology. Material from this comparative review will then support a conceptual analysis of what has been found to be culturally-specific vs. truly "universal" in psychology.

411 Advanced Social Psychology (3 cr.)

Same as SOC 411. Prerequisites: PSYC 301, junior or senior standing. Offered occasionally. Empirical research and experimentation and the application of theories of social psychology in a variety of situations and problems. An emphasis will be placed on the personal and social construction of the self. The social psychology of community health and the environment. Selection and analysis of some problems or events from current, local, or international incidents to demonstrate how social psychology principles can increase our understanding of the almost unlimited types of social situations.

412/512 Psychosocial Issues in Forced Migration (3 cr.)

Prerequisites: Permission of the instructor. Offered in fall.

Explores the psychosocial dimensions of forced migration including ethno-cultural concepts of well-being, sources of stress and coping, the impact of forced migration on child development, psychosocial consequences of torture and sexual victimization, and the interaction of trauma and bereavement. Culturally appropriate mental health assessment, community-based intervention programs, methods of program evaluation, and ethical issues in working with refugee populations will be discussed. This course is required of all students seeking the diploma in Forced Migration and Refugee Studies.

413 Psychosocial Interventions for Childhood Cancer (3 cr.)

Prerequisites: PSYC 342 and permission of instructor. Offered occasionally.

Childhood cancer is a major public health concern in Egypt and worldwide. Psychological interventions for childhood cancer have a significant impact on disease-related morbidity and mortality. In this course, students will engage in closely supervised psychological work with families whose children are being treated at the National Cancer Institute. Class discussions and assignments will focus on developing students' capacity for effective intervention and personal growth.

SOCIOLOGY

Department of Sociology, Anthropology, Psychology and Egyptology
School of Humanities and Social Sciences

Professor Emeritus: M. Kennedy
Professor: S. E. Ibrahim
Associate Professors: M. Abaza, N. Nosseir
Assistant Professor: M. Abdelrahman, H. Rizzo, M. Rouchdy

Sociology is the systematic study of society with special attention to social interaction and the social making of humans. It investigates the forces that hold society together and that threaten to pull it apart through the analysis of interaction at every level from micro-group interaction to competition of nation states. Having as its goal a holistic understanding of human society, human beings and their lives, sociology is relevant to a wide range of other disciplines and every day life issues. As a result, sociology has a broad scope that includes culture, family, gender, crime, religion, politics, development, population, and urbanization, among others. Besides their coursework, sociology majors are given the opportunity to carry out supervised field research as a part of their undergraduate program.

Bachelor of Arts

In addition to the possibility of pursuing advanced graduate work in sociology or related fields, majors are trained for employment in international development agencies, government, non-governmental organizations or the private sector in social and community services or research and managerial positions.

In order to declare the major in sociology, students must pass SOC 201 with at least a "B". Continuation within the major is dependent on maintaining at least 2.5 GPA within their concentration requirements. Students must take SOC 495 in their last full academic year. Courses at the 500-level are also open to selected advanced undergraduates.

A total of 120 credits is required for the bachelor's degree in sociology:

Core Curriculum (34-46 credits)

Concentration Requirements (42 credits)

SOC	201	Introduction to Sociology, 3 cr.
	204	Social Statistics, 3 cr.
ANTH/SOC	309	History of Social Theory*, 3 cr.
	310	Contemporary Social Theory*, 3 cr.
	381	Doing Survey Research in the Social Sciences, 3 cr.
	450	Third World Development*, 3 cr.
	495	Senior Seminar*, 3 cr.

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One of either

SOC	203	Social Problems of the Middle East, 3 cr.
	206	Arab Family Structure and Dynamics, 3 cr.

One of either

SOC	303	Social Movements*, 3 cr.
	307	Social Class and Inequality, 3 cr.

Two additional 300 level courses in sociology

Three additional 400 level courses in sociology

Collateral Requirements (24 credits)

Three of the following courses

ANTH	202	Cultural Anthropology, 3 cr.
PSYC	201	General Psychology, 3 cr.
POLS	201	Introduction to Political Science, 3 cr.
ECON	201	Introduction to Economics, 3 cr.
JRMC	200	Introduction to Mass communication, 3 cr.
CSCI	102	Introduction to Computers and their Applications, 3 cr.
ANTH	380	Fieldwork Methods, 3 cr.

Five additional courses from any social science or humanities discipline, or relevant substitutes, to be approved by the advisor, at least three of which must be at the 300 or 400 level.

Electives (8-20 credits)

A total of 120 credits

* Cross listed with Anthropology

Minor

The minor in sociology introduces students to the central concepts and methods of the field. Emphasis is on the theoretical perspectives of sociology in the study of society, culture, and the individual.

Requirements (15 credits): SOC 201 Introduction to Sociology, 381 Doing Survey Research in the Social Sciences, 309 History of Social Theory, **one** 300-level sociology course, **one** 400-level sociology course.

Sociology Courses (SOC)

201 Introduction to Sociology (3 cr.)

Offered in fall and spring.

General sociology concepts and theoretical issues. Survey of the field covering the sociology of small groups, the family, education, work, community structure, and political life; discussions on the uses of sociology.

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203 Social Problems of the Middle East (3 cr.)

Offered in fall.

Major theoretical perspectives in studying social problems. Systematic examination of the salient stresses and strains in Egyptian, Arab, and Middle Eastern societies. Discussion of selected concrete problems, such as population, bureaucracy, youth unrest, deviance, drugs, prostitution.

204 Social Statistics (3 cr.)

Offered in fall.

This course is designed for students in the social sciences who do not have a background in mathematics except high school algebra. The course will provide an introduction to statistics as a tool for analyzing and understanding data related to social life. The course deals with basic concepts and procedures and integrates SPSS demonstrations and exercises. Prerequisites: Students must have taken SOC 201, no exceptions.

206 Arab Family Structure and Dynamics (3 cr.)

Offered in spring.

The family as a social institution with emphasis on Middle Eastern characteristics, selected aspects of marriage and family life, special attention to the social consequences of changing family styles.

210 Arab Society (3 cr.)

Same as ANTH 210. Offered in fall and spring.

Description and analysis of social and cultural characteristics and problems of contemporary Arab Society, taking into consideration the specific historical, economic, and ideological forces that shape it. The social basis for Arab unity and identity. Introduction to basic concepts and principles for understanding social phenomena.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally.

Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

301 Social Psychology (3 cr.)

Same as PSYC 301. Prerequisites: PSYC 201 and 202. Offered occasionally.

The extension of general psychological principles and methods to the study of interaction and social environment. The nature and methodology of research in social psychology. The major theoretical concepts and their applications and contributions to a variety of areas in the field including development and socialization, social perception and attribution of causality, attitude formation and changes, pro- and anti-social behavior, interpersonal attraction and intimacy, and the social effects and functions of groups.

303 Social Movements (3 cr.)

Same as ANTH 303. Prerequisites: 6 hours of social sciences and at least sophomore standing. Offered in spring.

Basic processes by which societies initiate, consolidate, transform, and change their basic institutions and social structures. Anatomy of reform and revolutionary social movements, especially those affecting Arab and Third World societies.

304 Bureaucracy and Development (3 cr.)

Same as POLS 304. Prerequisite: 6 hours of social sciences or consent of instructor. Offered in alternate years.

Relationship between the character of formal organizations and the unfolding of sociopolitical processes. Importance of bureaucratic forms of organization, advantages and problems of bureaucracy, pathologies of bureaucracy, bureaucratic behavior and corruption, alternatives to bureaucratic organization.

306 Sociology of Literature (3 cr.)

Prerequisites: 6 hours of social sciences or comparative literature, and at least sophomore standing. Offered occasionally.

The social bases of literary productions both oral and written and the functions of literature for social integration. The interrelationship of literary expression and movements for social change.

307 Social Class and Inequality (3 cr.)

Prerequisites: 6 hours of social sciences, and at least sophomore standing. Offered in fall. The basic theory and methods of the sociology of inequality. The nature and variety of stratification systems, major theories of stratification, empirical studies and social correlates of class phenomena, social mobility, and class conflict. Emphasis on Middle Eastern material.

309 History of Social Theory (3 cr.)

Same as ANTH 309. Prerequisites: 9 hours of social sciences, and junior or senior standing, or consent of instructor. Offered in fall.

The nature and function of social theory and its development, especially since the Enlightenment. Emphasis on the cumulative insights and ideas which have contributed to modern social theory. The essential aspects of the philosophy of social science, especially epistemological problems in the sciences of sociology and anthropology.

310 Contemporary Sociological Theory (3 cr.)

Same as ANTH 310. Prerequisite: SOC or ANTH 309 or consent of instructor. Offered in spring.

The main trends, basic problems, and unresolved issues of post-war sociological thought. Essential aspects of the logic of scientific inquiry; contemporary theories as model building in sociology including new functionalism, critical theory, structuralism and poststructuralism.

321 Urban Society in Transition (3 cr.)

Same as ANTH 321. Prerequisites: 6 hours of social sciences, and at least sophomore standing. Offered in spring.

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The nature of urban society: occupation and population trends, residential and work patterns in traditional and modern cities, rural-urban migration, patterns of urban conflict. Problems arising from the growth of modern town and city life. City planning in regard to social and industrial change.

322 Rural Sociology (3 cr.)

Prerequisites: 6 hours of social sciences, and at least sophomore standing.

Offered occasionally.

The Middle Eastern rural community and its relation to agricultural development, tenure systems, ecological processes, urbanization, migration, and changing technology.

323 Fundamentals of Population Studies (3 cr.)

Prerequisites: 6 hours of social sciences, and at least sophomore standing. Offered in alternate years.

Facts and issues of human population. Creates demographic literacy, and an ability to deal with population realities. Substantive knowledge covering processes and determinants of population structure, growth, and changes: fertility, mortality, and migration, as well as challenges of population growth.

332 Race, Ethnic and Minority Relations (3 cr.)

Same as ANTH 332. Prerequisites: 6 hours of social sciences, and at least sophomore standing. Offered occasionally.

Comparative study of race, ethnic, and other types of categorizations of people within complex societies. Focus on the nature of ethnic identity and change, stratification, competition, conflict, and accommodation.

370 Environmental Issues in Development (3 cr.)

Same as ANTH 370.

This course examines issues of environment in the context of development. It includes both the technical aspects of environmental studies and the social and cultural dimensions, linked through the notion of sustainability. Case studies include examples where development has led to the deterioration of the environment, or where it has enhanced it. Major issues include the question of water supply (scarcity) in the Nile Valley and in Palestine, urban pollution, nuclear energy, global warming and the ozone layer, tourism and development. The course takes social, cultural and political factors into account.

381 Doing Survey Research in the Social Sciences (3 cr.)

Prerequisite: SOC 201 and SOC 204. Offered in spring.

This course introduces students to the basic survey methods used in the social sciences. Emphasis is on the logic of social science and the implications of the major forms of quantitative research methodology. Allows students to recognize and analyze merits of research in the social sciences including public opinion and policy action research. Students will be encouraged to conduct mini-scale surveys on the campus and beyond.

400 Selected Topics in Sociology (3 cr.)

Prerequisites: 9 hours of social sciences, and junior or senior standing.

Offered occasionally.

Topics to be chosen according to specific interests, such as sociology of medicine, sex roles, symbolic interaction, applied sociology. May be repeated for credit if content changes.

402 Independent Study (3 cr.)

Prerequisites: a minimum B average, consent of the instructor, and approval by the Unit Head and the Department Chair. Offered in fall and spring.

In exceptional circumstances some seniors and graduating seniors with department approval may arrange for independent study on a chosen topic in sociology that is not covered in the regular offerings for that academic year. Guided readings, research and frequent consultations held. May be repeated for credit if content changes.

405 Industrial Sociology (3 cr.)

Prerequisites: Junior or senior standing, 6 hrs. of social science or the permission of the instructor. Offered occasionally.

How work is organized under various institutional settings. Topics to be discussed include: the impact of the development of science and technology on the social organization of work, work relations, managerial strategies, and labor response.

406 Educational Sociology (3 cr.)

Prerequisites: 9 hours of social sciences, and junior or senior standing.

Offered occasionally.

The nature and interrelationship of educational agencies to other social institutions. The emergent structure of Middle Eastern educational programs and their implications for social change and integration.

408 Criminology (3 cr.)

Prerequisites: 9 hours of social sciences, and junior or senior standing. Offered in fall.

Theories of crime and social control. Institutional programs charged with the custody and treatment of law violators. Problems of deviance as related to class structure and social change.

409 Sociology of Addiction (3 cr.)

Same as PSYC 409. Prerequisites: nine hours of SOC/PSYC coursework and senior standing, or consent of the instructor. Offered occasionally.

An interdisciplinary social-psychological approach to the analysis and interpretation of the phenomenon of addiction in modern society. This course explores the role of social sciences in addressing the issue and the significance of social psychological explanations in theory, treatment and research on addiction. The student is required to participate in fieldwork and class presentations and do assigned readings.

411 Advanced Social Psychology (3 cr.)

Same as PSYC 411. Prerequisites: PSYC 301, junior or senior standing.

Offered occasionally.

Empirical research and experimentation and the application of theories of social

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psychology in a variety of situations and problems. An emphasis will be placed on the personal and social construction of the self. The social psychology of community health. Selection and analysis of some problems or events from current, local, or international incidents to demonstrate how social psychology principles can increase our understanding of the almost unlimited types of social situations.

422 Religious and Symbolic Systems (3 cr.)

Same as ANTH 422. Prerequisites: 9 hours of social sciences and junior or senior standing. Offered in fall.

Cross-cultural study of religion as a symbol system and its relationship to social action. Major anthropological and sociological theories as they relate to primitive and historic religions and to contemporary trends in religious expression. Cosmology and symbol systems, ritual and power, values, ecstatic religion. The individual and belief, and the relationship between religion and culture as a shared system of meaning.

431 Political Sociology (3 cr.)

Same as POLS 431. Prerequisites: 9 hours of social sciences, and junior or senior standing. Offered in fall.

Social bases of various political systems such as Western-type democracy, authoritarianism, and totalitarianism. Topics include: determinants of political behavior, power, elite formation, bureaucracy, and the political role of the military and intellectuals in Third World societies.

445 Selected Topics in Coptic Studies (3 cr.)

Same as ARBS, EGPT, HIST, ANTH 445. Offered in fall.

This course allows instructors to offer a topic in Coptic Studies. The topic will be chosen from year to year in coordination with the departments concerned and the dean of the School of HUSS, and according to the individual interests and areas of expertise of the instructors. Topics chosen may include various aspects of Coptic art and history, monasticism, folklore, or other subjects. The course may be taken more than once if the topic changes. Students in these majors may petition preferably before registration to have the course included in their major requirements.

450 Third World Development (3 cr.)

Same as ANTH 450. Prerequisites: 9 hours of social sciences and junior or senior standing. Offered in fall and spring.

Contemporary theories of development as they apply to and illuminate the problems of development in underdeveloped countries. The approach will be interdisciplinary.

455 Seminar in African Studies (3 cr.)

Same as ANTH/POLS 455. Prerequisite: Junior or Senior standing and consent of the instructor. Offered occasionally.

Through the examination of a contemporary topic in African Studies, this interdisciplinary seminar examines epistemological and methodological issues in African Studies such as transformation, resistance, power, technology, and women and

development. Original sources will be used to examine the theoretical assumptions, data, and methods underlying the literature. Prior course work in African Studies is recommended.

460 Development Studies Seminar (3 cr.)

Same as ANTH/ECON/POLS 460. Prerequisites: 12 hours of social science courses. Offered occasionally.

Interdisciplinary and comparative analysis of development as a process and as a historical phenomenon. Critical evaluation of economic, political, social, and cultural technological and managerial factors that structure developmental change.

495 Senior Seminar (3 cr.)

Same as ANTH 495. Prerequisites: SOC 381 or ANTH 380 and senior standing or consent of the instructor. Offered in spring.

Emphasis on current methodological trends in anthropology and sociology reflecting the research interests of the faculty and students, and drawing on the experience of the undergraduate career. Content may therefore vary from year to year. The student will be required to write a methodologically sound senior paper, preferably based on field research.



THEATRE

Department of Performing and Visual Arts
School of Humanities and Social Sciences

Professor: S. Campbell (Chair)
Associate Professors: F. Bradley, M. El Lozy
Assistant Professors: J. Arnold, L. Tatom

The Department of Performing and Visual Arts offers both a bachelor's degree and a minor in theatre. The curriculum balances hands-on, practical theatre experience through involvement in mainstage and black box performances, along with a solid foundation in the literature, history, and theory of theatre. The program offers a generalist approach to theatre study, while providing students an opportunity to explore deeper involvement in one of four areas of emphasis: performance, directing, design, and critical study. Interaction between the various artistic disciplines is promoted. The program integrates non-Western, especially the Arabic/Egyptian, contributions to the art of theatre.

Performances

The department offers a season of four to six full-length plays and many student-directed one act plays in its two new state-of-the-art theatres, the Falaki Mainstage and the Falaki Studio Theatres. The department offers students opportunities to interact with internationally renowned guest artists who are brought to AUC to serve as directors, designers, and performers. Students who participate in performances, whether on stage or back stage, are eligible to receive course credit ranging from one to three hours (THTR 240, 340) depending on the extent of involvement. The department also supports an active student-produced theatre group, the Howard Cafe, which performs in the Howard Black Box Theatre.

Bachelor of Arts

The curriculum provides a generalist approach within a liberal arts tradition. Theatre majors follow a program of studio courses (acting, directing, movement, voice and design), a program of courses in dramatic literature and theatre history, and they play an active and creative part in the department's productions. The program is flexible enough to allow for a certain measure of emphasis in areas of theatre of particular interest to the student.

A total of 120 credits is required for the bachelor's degree in theatre.
Core Curriculum (34-46 credits)

<i>Concentration Requirements (49-54 credits)</i>	
THTR 203	The Art of Theatre
204	Introduction to Technical Theatre

THTR	225	Acting I
	227	Acting II
	230	Play analysis
	324	Design for Theatre
	328	Directing I
	350-351	History of Theatre and Drama I & II
	353	Modern Drama
	240/340	Rehearsal/Performance/Production Practicum (6 hrs. min.)

Practicum Courses (240/340) must be in at least three of the following areas: a. Performance; b. Construction (Scenery, Costume, Props, Lighting, or sound); c. Stage Management; d. Run Crew.

One course from the following:

THTR	325	Acting Styles
	327	Special Topics in Acting
	329	Acting Shakespeare

Five additional courses in the department to be chosen from among the following courses:

THTR	226	Acting in Arabic I
	320	Design for Theatre: Scenography
	321	Design for Theatre: Lighting
	322	Design for Theatre: Costume
	325	Acting Styles
	326	Acting in Arabic II
	327	Special Topics in Acting
	344	Design Practicum
	352	Recurrent Themes in Drama
	360	Playwriting
	428	Directing II
	495	Senior Honors Project *

* Students who enter their major senior years with a major of GPA of 3.4 or above and a cumulative GPA of 3.2 or above are eligible to take THTR 495.

Collateral Requirements (9 credits):

ECLT	360	Shakespeare
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Two additional courses to be chosen from among the following:

FILM	220	Introduction to Film
MUSC	220	Introduction to Music
ARTV	200	Foundations of Design and Color
ARTV	212	World Art Survey II

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ARBS 316	Modern Arabic Drama
JRMC 230	Introduction to Photography
ECLT 411	History of Literary Criticism

Electives (11-28 credits):

The program will actively encourage its majors to work towards minors in fields such as anthropology, sociology, literature, music, art, political science, or business administration. Elective credits will be used for the minor.

Minor

The minor in theatre provides a general introduction to the art form. It aims at introducing the student to the art and craft of theatre through the study of dramatic literature and the exploration of performance processes.

Requirements: A minimum of 15 credits in theater including: THTR 203 The Art of the Theater, at least 3 credits of an analytical or literature course (THTR 230, 350, 351, 352 or 353), at least 3 credits from the 300 level, and 1-3 credits from THTR 240/340 - Rehearsal/Performance/Production Practicum.

Students are encouraged to declare the minor as soon as possible so that a course of study can be planned with the theatre advisor to give the student an opportunity to gain theater production credit early in their academic career. The department reserves the right not to accept minors when the program of courses has not been previously worked out with the faculty advisor.

Theatre Courses (THTR)

203 The Art of the Theatre (3 cr.)

Offered in fall and spring.

An introduction to theatre as a collective art form by exploring all of its components and participants: from playwright to actor, from director to designers, from producing team to audience.

204 Introduction to Technical Theatre (3 cr.)

Offered each year.

An introduction to the theories, techniques, tools, and materials of technical theatre. Technical areas to be covered include organization, architecture, shops, stage equipment, scenery, props, lighting, sound, costumes, makeup, technical direction, and stage management. Students will be expected to work on one of the technical crews for a major drama department production concurrently with this course.

215 Acting for Non-Majors (3 cr.)

Offered in fall and spring.

May not be used for departmental credit by theatre majors or minors. An introduction

to the art and technique of acting for the non-major student, utilizing training games and exercises to present the student with a general overview of the acting process, while also providing experiences and techniques beneficial to basic human communication.

225 Acting I (3 cr.)

Prerequisite: THTR 203. Offered in fall and spring, and occasionally in the summer. A basic course in the fundamentals of acting, designed for majors, minors, and those with some previous experience. In-class exercises and improvisations, combined with rehearsed scenes and monologues from simple realistic texts, will help students gain proficiency in objective/obstacles, creation of a character, basic voice and breath control, and basic body alignment and awareness.

226 Acting in Arabic I (3 cr.)

Prerequisites: THTR 203. Offered in fall or spring. The art and craft of acting as a systematic process applied to the specific demands of Arabic Drama. Scene work and monologues from modern and contemporary Arabic plays.

227 Acting II (3 cr.)

Prerequisite: THTR 225. Offered once a year. Students will build upon their knowledge of the acting process through focus upon a more rigorous examination of the development of a character, utilizing challenging scenes from early modern playwrights such as Chekhov, Pinter, Albee and Williams. Additionally, vocal and bodywork will continue through exploration of standard speech production, kinesthetic and relaxation techniques.

230 Play Analysis (3 cr.)

Offered in fall or spring. The development of the art of reading a play through detailed examination of its dramatic structure and in-depth analysis of its text. Both Western and Arabic plays will be examined.

240 Theatre Practicum (1 cr. per production)

A course for any student who wishes to gain academic credit for significant contribution to departmental theatre productions. Minimum of 50 hours practical work. Students work under direct supervision of a theatre faculty member. Areas: a. Performance; b. Construction (Scenery, Costume, Props, Lighting, or Sound); c. Stage Management; d. Run Crew. Registration by permission of the faculty member in charge of the specific activity. Repeatable for credit. No maximum.

299 Selected Topic for Core Curriculum (3 cr.)

Prerequisite: ECLT 101. Offered occasionally. Course addressing broad intellectual concerns and accessible to all students, irrespective of major.

320 Design for Theatre: Scenography (3 cr.)

Prerequisite: THTR 224. Offered occasionally. Theory and application of set design techniques.

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321 Design for Theatre: Lighting (3 cr.)

Prerequisite: THTR 224. Offered occasionally.

Theory and application of light design techniques.

322 Design for Theatre: Costume (3 cr.)

Prerequisite: THTR 224. Offered occasionally.

Theory and application of costume design techniques.

324 Design for the Theatre (3 cr.)

Prerequisites: THTR 203 and 204. Offered once a year.

A study of the principles of visual design and their application for the theatre. Play analysis that focuses on visual and spatial design requirements. Includes scenery, costumes, and lighting. Involves drawing, painting, model making, and research into period styles.

325 Acting Styles (3 cr.)

Prerequisite: THTR 227. Offered once every other year.

An advanced acting class, offering exploration and techniques in several varied acting styles, including but not limited to Greek/Roman, Medieval, Restoration, Neo-Classicism, Romanticism, Farce, Expressionism and Absurdism. Vocal will be examined through ensemble patterns, shared speech and period movement work. Content of course to be determined by the interests and expertise of the faculty.

326 Acting in Arabic II (3 cr.)

Prerequisite: THTR 226. Offered in fall or spring.

A continuation on a more advanced level of the work started in Acting in Arabic I, applied to a wider range culminating in the presentation of a class term project.

327 Special Topics in Acting (3 cr.)

May be repeated for credit if content changes. Prerequisite: THTR 227.

Offered occasionally.

In-depth examination and implementation of specialized acting and performance skills and techniques. Focus of study to be determined by the special interests and expertise of the faculty.

328 Directing I (4 cr.)

May be repeated once for credit as content changes. Prerequisite: THTR 230. Offered in fall or spring.

The fundamental directorial controls, theoretical and practical training leading to the production of single scenes.

329 Acting Shakespeare (3 cr.)

Prerequisite: THTR 227. Offered once every other year.

An advanced acting class, offering exploration and techniques in the acting and characterization of Shakespearean drama. Emphasis on verse and prose, Shakespearean character development, and necessary physical and vocal preparation, including advanced breath control and text-inspired movement.

340 Advanced Theatre Practicum (3 cr.)

Prerequisite: THTR 204 and consent of instructor. Offered fall and spring. Advanced, specialized, and intensive participation in theatre production activities. Assignments made in major supervisory positions in consultation with and under the supervision of a theatre faculty member. Technical production areas of scenery, costumes, props, lighting, or sound, or stage management. Repeatable for credit. No maximum.

344 Design Practicum (3 cr.)

Prerequisites: Selection by application and interview. Offered occasionally. A course for students who wish to learn about theatre design through participation in designing a departmental theatre production. Students selected through application and interview process. Selected students will form a design team that will be responsible for designing scenery, props, costumes, lighting, and sound for a major production. Repeatable for credit.

350-351 History of Theatre and Drama I & II (3 cr.)

Offered in alternate years. A one year course that surveys the development of theatre and drama through a study of the history of the playhouse, the practitioner, dramatic production, and dramatic literature from the Greeks to the present. The course is taught in a combination of lecture and slide-show presentation.

352 Recurrent Themes in Drama (3 cr.)

Same as ECLT 352. Offered in alternate years. Readings centered upon the illustration of a theme recurring through the ages in dramatic literature.

353 Modern Drama (3 cr.)

Same as ECLT 353. Offered in alternate years. A study of mainly European drama in the period from Ibsen to the present, including plays by Shaw, Chekhov, Strindberg, Pirandello, Brecht, Sartre, Beckett, Pinter and others, and dealing with related developments in theatre, culture and society.

360 Playwriting (3 cr.)

Prerequisite: THTR 230. Offered occasionally. A workshop in which students write and discuss their own drama. Emphasis is also laid on learning from reading dramatic works, ancient and drama.

370 Selected Topics in Theatre (3 cr.)

May be repeated for credit if content changes. Prerequisite: consent of the instructor. Offered occasionally. In-depth examination of specific topics in theatre determined by the special interests and expertise of the faculty.

402 Independent Study (1-3 cr.)

Minimum B average required. Offered in fall and spring. In exceptional circumstances, some senior majors may arrange, with departmental approval, to study beyond the regular course offerings.

428 Directing II (4 cr.)

Prerequisites: THTR 328 and completion of all 200-level requirements.

Offered occasionally.

Advanced theoretical and practical, production-oriented training in play direction culminating in the presentation of a directorial project.

470 Senior Seminar (3 cr.)

Prerequisite: consent of the instructor. Offered occasionally.

In-depth examination of advanced topics in theatre determined by the special interests of the faculty. Designed for senior majors.

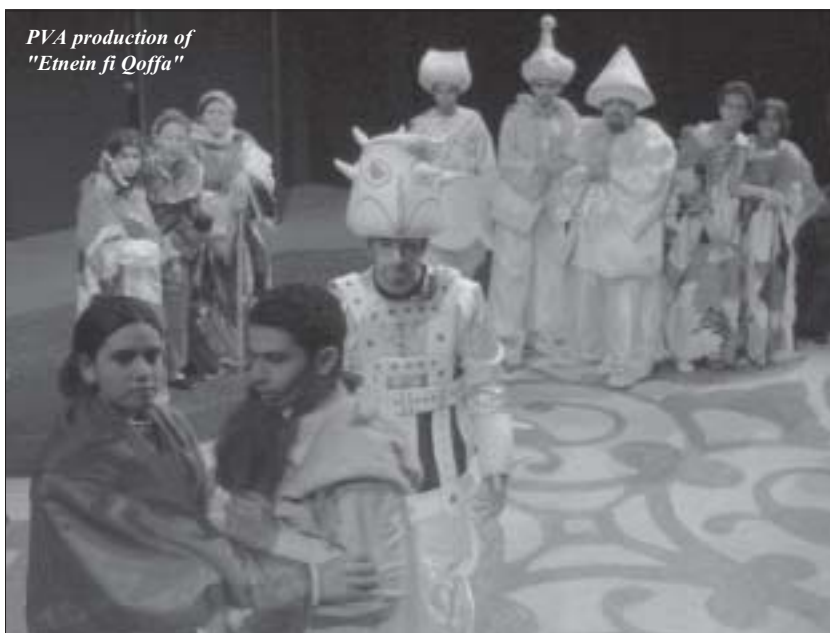
495 Senior Honors Project (3 cr.)

Offered in fall and spring.

Offered to first or second semester seniors in the department who have distinguished themselves artistically and academically (minimum 3.4 GPA in the major, 3.2 cumulative). A major project, combining research and creative work in the areas of directing, design, performance, playwriting, or dramaturgy. Projects will be chosen by students in consultation with a faculty advisor. By consent of instructor.

United States History

Minor - See History



LANGUAGE INSTITUTES

In addition to the degree programs and courses just described, the academic units of the School of Humanities and Social Sciences offer Arabic and English language programs. The Arabic Language Institute provides courses in Arabic for regular degree students and for non-degree students. It also provides intensive Arabic language instruction for non-Arabic speakers. The Intensive English Program and English 111, Academic English for Freshmen, of the English Language Institute provide instruction for students who have been admitted into a degree program but who require further work to achieve the required level of English language proficiency.

Arabic Language Institute

Professor: El S. Badawi (Director, Arabic Language Institute)

Professor: A. El-Gibali

Arabic Language Teachers: M. K. Abdel Salam, N. Abdel Wahab, D. Abo El-Seoud, J. Allam, N. El Assiouti, Sh. Attalla, M. Attia, R. El-Essawi, Sh. El-Ezabi, N. Harb, M. Hassan, A. Hassanein, Z. Ibrahim, N. Korica (Coordinator, Arabic Language Unit), S. Massoud, M. S. Moussa (Coordinator, Arabic Language Credit Courses), I. Saad, H. Salem, L. Al-Sawi, S.erry, Z. Taha (Executive Director, Center for Arabic Study Abroad), A. El-Tonsi, A. Wakid, N. Warraki (Director, Arabic Language Unit), L. White and Sh. Yacout

The Arabic Language Institute is responsible for Arabic language instruction within the university's academic structure. It includes the university's TAFL (Teaching Arabic as a Foreign Language) M.A. program as well as regular nonintensive and accelerated courses in Arabic offered for academic credit.

Under the umbrella of the Arabic Language Institute, two intensive programs are administered: the Arabic Language Unit intensive Arabic courses (ALIN courses) and the Center for Arabic Study Abroad (CASA). These programs award program (but not academic) credit toward a degree at AUC. Students, however, may be able to obtain credit toward an academic degree at their home institution for their Intensive Arabic Language

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(ALIN) coursework. They should determine their institution's policy regarding transfer credit before coming to Cairo.

Although the courses offered in the ALU are similar in content and number of credit hours to the academic credit courses, they are given program credits because some students studying in the ALU do not meet AUC's admission requirements, such as holding an acceptable high school diploma or passing an English language examination.

Arabic Language Credit Courses (ALNG)

All Arabic language credit classes at AUC are administered and taught by the Arabic Language Institute. For details of university Arabic language requirements, see the "General Academic Requirements" section.

101-102 -103 Elementary Arabic (3 cr. per semester)

Noncredit for Thanawiyya Amma holders. Three semester sequence. Each course meets five hours per week. Registration requires the permission of ALNG coordinator.

Develops the fundamentals of modern standard Arabic through reading, writing, and oral drill within a framework of the essentials of syntax, morphology, and a working vocabulary.

109-110 Introduction to Colloquial Arabic (3 cr. per semester)

Noncredit for students from Arab countries. Registration requires permission of the ALNG Coordinator. Offered in fall and spring.

Study, by means of phonetic transcription, or the Arabic alphabet of the basic inflectional and syntactical patterns of Egyptian colloquial Arabic. Instruction includes one hour of language laboratory.

111-112 Accelerated Elementary Modern Standard Arabic (6 cr. per semester)

Noncredit for Thanawiyya Amma holders. Two-semester sequence. Registration requires permission of the ALNG coordinator.

A semi-intensive course meeting ten hours per week and covering the material of ALNG 101-102 and 103-201.

201-202-203 Intermediate Arabic (3 cr. each per semester)

Noncredit for Thanawiyya Amma holders. Prerequisite: ALNG 103 or placement examination. Three-semester sequence. Each course meets five hours per week. Registration requires permission of the ALNG coordinator.

Increases the command of grammatical and syntactical structure of modern standard Arabic through reading materials; develops reading and writing skills and comprehension. Critical examination of social and cultural dimensions of reading materials.

204 Arabic of the News Media (3 cr.)

Noncredit for Thanawiyya Amma holders. Prerequisite: ALNG 201. Registration requires permission of the ALNG coordinator.

Introduction to the vocabulary and style of the Egyptian press. Readings from the Cairo daily newspapers and weekly magazines.

211-212 Accelerated Intermediate Modern Standard Arabic (6 cr. each per semester)

Noncredit for Thanawiyya Amma holders. Two-semester sequence. Registration requires specific permission of the ALNG coordinator.

A semi intensive course meeting ten hours per week. Increases the command of grammatical and syntactical structure of modern standard Arabic through reading materials; develops reading and writing skills and comprehension. Critical examination of social and cultural dimensions of reading materials. ALNG 211 covers material of ALNG 202-203.

311-312 Accelerated Advanced Modern Standard Arabic (6 cr. per semester)

Noncredit for Thanawiyya Amma holders. Two-semester sequence. Registration requires permission of the ALNG coordinator.

A semi intensive course meeting ten hours per week, aimed at preparing advanced, non-native speaking students for upper-division or graduate-level work in the Arabic language.

413-414 Arabic Syntax (Nahw) (3 cr. per semester)

Same as ARBS 413-414. 413 offered in fall, 414 offered in spring.

Examination of the basic features of Arabic syntax (nahw) with particular reference to the treatment of the subject by Arab grammarians. Reference is also made to the system of terminology adopted for the study of Arabic syntax by Western scholars. The language of instruction is Arabic.

415 Arabic Morphology (Sarf) and Prosody ('Arud) (3 cr.)

Same as ARBS 415. Offered occasionally.

Examination of the basic features of Arabic morphology (sarf) and prosody ('arud) with particular reference to the treatment of the subjects by Arab grammarians. Reference is also made to the system of terminology adopted for the subject by Western scholars. The language of instruction is Arabic.

425 Linguistics of Arabic (3 cr.)

Same as ARBS 425. Offered in alternate years.

Development of the linguistic structure of Arabic and the Arabic of the early Islamic era as described by the early Arab philologists.

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426 The Phonetics of Arabic (3 cr.)

Same as ARBS 426. Offered in fall.

Phonetics of classical Arabic as it is spoken in Egypt; reference to the phonetics of both Egyptian colloquial Arabic and the Arabic of the early Islamic era as described by the early Arab phoneticians.

Arabic Writing Courses (ALWT)

221 From Reading to Writing: Intermediate Level: 3 credits

Offered in the fall and spring.

Students scoring less than 70 in the Arabic Writing Placement exam can take this course. This course combines reading and writing skills in various disciplines such as Political Science, Anthropology, Economics, History, Arts, etc. Special attention is given to basic structures, fixing common mistakes, rhetorical devices, clichés, collocations, and vocabulary building.

321 From Reading to Writing: High Intermediate Level: 3 credits

Offered in the fall and spring.

Students scoring from 70-84 in the Arabic Writing Placement exam can take this course. This course combines reading and writing skills in various disciplines such as Political Science, Anthropology, Economics, History, Arts, etc. Special attention is given to basic structures, fixing common mistakes, rhetorical devices, clichés, collocations, and vocabulary building. The level of material taught is higher than those taught in ALWT 221 but following the same guidelines.

420 From Reading to Writing: Advanced Level: 3 credits

Prerequisite: Score 85 or more in the Arabic Writing Placement Exam or have taken either 221 or 321. Offered in the fall and spring.

This course combines reading and writing skills in various disciplines such as Political Science, Anthropology, Economics, History, Arts, etc. It develops further the reading and writing skills. Special attention is given to complex structures, fixing common mistakes, rhetorical devices, clichés, collocations, and vocabulary building.

421 Professional Media Writing: 3 credits

Prerequisite: Score 85 or more in the Arabic Writing Placement Exam or have taken either 221 or 321. Offered in the fall.

The course bridges the communication gap between language course work and information-transfer needs of media. The course trains the student to write major forms of media writing, including correspondence, memoranda, reports and the like.

422 Professional Business Writing: 3 credits

Prerequisite: Score 85 or more in the Arabic Writing Placement Exam or have taken either 221 or 321. Offered in the fall and spring.

The course bridges the communication gap between language course work and in-

formation-transfer needs of business. The course trains the student to write major forms of business writing, including correspondence, memoranda, reports and the like.

423 Professional Diplomatic Writing: 3 credits

Prerequisite: Score 85 or more in the Arabic Writing Placement Exam or have taken either 221 or 321. Offered in the fall and spring.

The course bridges the communication gap between language course work and information-transfer needs of diplomacy. The course trains the student to write major forms of diplomatic writing, including correspondence, memoranda, reports and the like.

462 Professional Translation in Business: 3 credits

Prerequisite ALWT 420 or consent of instructor. Offered in the fall and spring.

This course is designed to meet the pressing need for high level translation in all work places. Attention is given to points of contrast, idiomatic usage, semantic fields of corresponding vocabulary in both English and Arabic in business administration and economics.

463 Diplomatic Professional Translation: 3 credits

Prerequisite ALWT 420 or consent of instructor. Offered in the fall and spring.

This course is designed to meet the pressing need for high level translation in all work places. Attention is given to points of contrast, idiomatic usage, and semantic fields of corresponding vocabulary in both English and Arabic in the field of diplomacy and political science.

521 Professional T.V. Script Writing: 3 credits

Prerequisites: ALWT 421 or consent of instructor. Offered in the spring.

This course is a continuation of ALWT421. This course train students to write T.V. scripts. It makes them practice interviewing and commenting in Modern Standard Arabic helps them to acquire further knowledge of the various TV language characteristics; go deeper into the issue of culture-bound language in relation to the level of language, and develop a command of a number of techniques for Arabic TV reporting.

Intensive Arabic

The Arabic Language Institute offers intensive Arabic language courses for students, businessmen, diplomats, scholars, and others needing to gain a broad command of contemporary Arabic as quickly and as effectively as possible. For over sixty years, first through its School of Oriental Studies and then through its Center for Arabic Studies, AUC has taught Arabic to foreigners. Since the inception of what is now the Arabic Language Institute in the 1970s, this program has attracted students from the United States, Africa, Asia and Europe, offering intensive courses in both modern standard and Egyptian colloquial Arabic. A summer program is also offered.

Intensive Arabic Language courses (ALIN) are part of the Arabic Language Institute's program. Students must register for a minimum of twelve program credit hours per

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semester, while the normal course load is twenty contact hours per week. All courses are taken for grades, and program credit is awarded as indicated at the beginning of each course listing. Qualified students may receive up to nine undergraduate credits from AUC by petitioning the director of the program (see "Non-degree Academic Regulations" for transfers of credit to other universities under "Undergraduate Academic Requirements").

Elementary Level

The course for beginners runs from the first week of September through May. The main emphasis is on modern standard Arabic, but Egyptian colloquial Arabic is simultaneously offered (about thirty percent of class time is devoted to colloquial). Arabic is used as the main medium of instruction in the second half of the program. The course comprises up to twenty hours per week of classroom instruction, including language laboratory work, and up to twenty hours of home assignments.

A student who successfully completes the first year of intensive study with the Arabic Language Institute can expect to possess a working competence in reading and writing modern standard Arabic and understanding and speaking Egyptian colloquial or modern standard Arabic.

Intermediate Level

Courses at this level are designed for those who have completed a year of intensive study at the elementary level of the Arabic Language Institute or who have studied two or more years elsewhere and can demonstrate a similar level of competence. The program runs from the first week of September through May in the following year.

Arabic is the chief medium of instruction. Students continue work in modern standard Arabic and Egyptian colloquial Arabic. Interested students may, at this level, begin to acquire familiarity with classical Arabic. Attention is given to the Arabic of print and broadcast media, while special lecture courses in Arabic are offered in response to the special interests of the students, such as Middle Eastern economics and politics, business correspondence, medieval and modern Arabic literature.

Students who complete this second year of study should be able to read and write modern standard Arabic with some fluency, to pursue study in topics that specially interest them in Arabic, and to converse freely in Arabic. Intermediate-level students will also have had an opportunity to acquire vocabulary and terminology related to such special fields of interest as business and diplomacy.

Advanced Level

Exceptional students may wish to take a third year. These courses are arranged according to demand, but they typically include advanced work in reading and writing and lecture courses in special topics. At the end of such a course a student should be able to compete with Arab students at the university level. Alternatively, the student should be able to employ Arabic with competence and confidence in the fields of business and/or diplomacy.

Certificate and Program Requirements

ALI Fulltime students must take twenty contact hours per week for which they are

awarded twelve program credits per semester. Students who successfully complete twenty four program credits receive certificates of achievement from the Arabic Language Institute (specifying their level, i.e. elementary, intermediate or advanced), (See the Intensive Arabic Language Course listing and the number of program credits awarded for each course).

Intensive Summer Program

Director: L. Al-Sawi

The Arabic Language Institute offers an intensive summer program from the second week of June until the last week of July. Students must take twenty hours of class per week to be considered full-time. The summer curriculum includes either Modern Standard Arabic (MSA) and Egyptian Colloquial Arabic (ECA) at all levels, or Modern Standard Arabic only, both options as a full load.

In addition, a number of electives is also offered out of which each student may take up to two (based on the required credits).

A minimum of six program credits may be earned in the summer toward the Arabic Language Institute certificate.

Extra Curricular Activities/Student Cultural Activity Program

An integral part of the intensive language program, both full year & summer, is an extensive series of tours of Cairo and trips to the easily visited sites of interest all over Egypt. These tours and trips are supplemented by a lecture series. While the institute subsidizes a large portion of the expenses, including transportation (except where air travel is involved) and entrance fees, students are required to pay for their food and lodging.

The Arabic Language Institute cultural program also includes a cultural component featuring activities such as calligraphy, music and folkloric dance.

In addition, the program includes an end of semester summer party which is organized with the active participation of the students.

Besides the above activities, in the summer semester, the Arabic Language Institute offers a series of weekly lectures covering the cultural, educational, economic and political aspects of life in Egypt.

Arabic Language Intensive Courses (ALIN)

ALIN courses are listed sequentially by area. In this three digit system, the first digit represents the level of the course: 1 for elementary, 2 for intermediate, and 3 for advanced.

Prerequisites are not listed for every course. However, entry into all intermediate and advanced courses presupposes that the student is of intermediate or advanced standing.

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The instructor's permission may also be required. Standing will be determined by written and/or oral placement tests for incoming students and sometimes for continuing students.

Courses in Modern Standard Arabic

101-102-103-104 Elementary Modern Standard Arabic

Program credit: 3 hrs each. Offered in fall and spring.

Develops the fundamentals of language through reading drills, within a framework of the essentials of syntax and morphology. Two-semester sequence. Any two consecutive courses can be taken simultaneously. Each course meets five hours per week.

105-106 Elementary Listening

Program credit: 2 hrs each. Offered in fall and spring.

Develops students' ability to listen and understand Modern Standard Arabic. Each course meets three hours per week.

201-202-203-204 Intermediate Modern Standard Arabic

Program credit: 3 hrs each. Offered in fall and spring.

Emphasizes the acquisition of vocabulary and increases the command of grammatical and syntactical structures. Further develops reading, writing, listening, and speaking skills. Two semester sequence. Any two consecutive courses can be taken simultaneously. Each course meets five hours per week.

205-206 Intermediate Grammar

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Examines the basic features of Arabic grammar with particular attention to the system of *i'rab*. Reference is also made to the Western system of grammatical terminology. Each course meets three or five hours per week.

207-208 Intermediate Spoken Modern Standard Arabic (MSA)

Program credit: 2 hrs each. Offered in fall and spring.

Uses selected written material to prepare students to engage in discussions in Modern Standard Arabic. Each course meets three hours per week.

209-210 Intermediate Listening and Speaking

Program credit: 3 hrs each. Offered in fall and spring.

Develops students' listening skills while expanding their vocabulary in wide range topics and increases their ability to speak and comprehend details by using selected authentic video and audio tapes. Each course meets five hours per week.

301-302 Advanced Modern Standard Arabic

Program credit: 3 hrs each. Offered in fall and spring.

Through the reading and analysis of selected texts, the course exposes students to a wide range of vocabulary, idiom, and style, while reviewing the major topics of grammar. Each course meets five hours per week.

305-306 Advanced Arabic Grammar

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Examines the complexities of Arabic grammar through textual analysis. Each course meets three or five hours per week.

307-308 Advanced Spoken Modern Standard Arabic (MSA)

Program credit: 2 hrs each. Offered in fall and spring.

Further develops students' ability to communicate orally in Modern Standard Arabic. Students present lectures, followed by question and answer sessions, and engage in debates and discussions. Each course meets three hours per week.

309-310 Advanced Listening and Speaking

Program credit: 3 hrs each. Prerequisites: ALIN 209-210 or consent of instructor. Offered in fall and spring.

Further develops students' listening and speaking skills by using selected authentic video and audio tapes, thus trains students to comprehend, communicate and discuss material in Modern Standard Arabic. Each course meets five hours per week.

Courses in Colloquial Arabic

111-112-113 Elementary Colloquial Arabic

Program credit: 4 hrs each. Offered in fall and spring.

Introduces students to the spoken Arabic of Cairo. Concentrates on basic vocabulary and syntax. Trains students to communicate orally in simple social situations. Each course meets seven hours per week.

211-212 Intermediate Colloquial Arabic

Program credit: 3 or 4 hrs each. Offered in fall and spring.

Concentrates on increasing student's vocabulary and command of syntax, with a higher level of fluency. Enables students to communicate with native speakers in a wide variety of social situations. Each course meets five or seven hours per week.

311-312 Advanced Colloquial Arabic

Program credit: 3 hrs each. Offered in fall and spring.

Develops students' ability to express themselves more precisely and fluently. Uses authentic material, whether recorded or written, to encourage discussion. Each course meets five hours per week.

Courses in Writing Arabic

121-122 Elementary Writing

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Develops basic writing skills useful in daily life. Trains students to summarize short informative passages and complete practical tasks such as filling out forms, writing

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messages, telegrams, invitations, etc. Each course meets three or five hours per week.

221-222 Intermediate Writing

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Develops students' ability to meet short practical writing needs. Trains students to summarize informative and narrative passages, gradually introducing more complex structures. Each course meets three or five hours per week.

223-224 Intermediate Business Writing

Program credit: 2 hrs each. Offered occasionally.

Introduces the Arabic used in business and commerce, focussing on the technical terms and formulas common to these fields. Includes bills, invoices, checks, memos, orders, applications, recruitment and product advertisement, complaints, etc. Each course meets three hours per week.

225-226 Intermediate Reading and Writing

Program credit: 3 hrs each. Offered in Fall and Spring.

Develops reading and writing by integrating the two skills in one course and introducing a wide variety of modern Arabic texts to be used for reading and a basis for writing assignments. The course develops the students' reading comprehension, vocabulary acquisition and acquaints them with the style of the Arabic essay. It prepares the student for the more sophisticated course in advanced reading and writing. Each course meets five hours per week.

321-322 Advanced Writing

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Equips students to write at greater length using a variety of techniques, including description, comparison, contrast, argumentation, etc. Refines students' ability to write cohesive summaries. Each course meets three or five hours per week.

323-324 Advanced Business Writing

Program credit: 2 hrs each. Prerequisite: ALIN 224. Offered occasionally.

Explores writing for sophisticated business and commercial situations. Includes agenda and minutes, tax declarations, contracts, by-laws, etc. Each course meets three hours per week.

325-326 Advanced Reading and Writing

Program credit: 3 hrs each. Prerequisites: ALIN 225-226 or consent of instructor. Offered in fall and spring.

Further develops reading and writing by integrating the two skills in one course and exposing the students to a wide variety of modern Arabic texts focusing on the different stylistic devices. Emphasis on analytic reading and essay writing. Each course meets five hours per week.

Courses in Media Arabic

131-132 Elementary Printed Media

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Introduces students to the basic format of the Egyptian newspaper and acquaints them with the vocabulary and syntax of the Arabic press through the reading of simple news items. Each course meets three or five hours per week.

133-134 Elementary Aural Media

Program credit: 2 or 3 hrs each. Prerequisite: ALIN 131. Offered in fall and spring.

Exposes students with some background in printed media to broadcast news media. Drills students in vocabulary and syntax and helps them develop strategies for listening comprehension. Each course meets three or five hours per week.

231-232 Intermediate Printed Media

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Exposes students to a wider range of topics selected from the Arabic press. Emphasizes vocabulary and idiom acquisition, and begins to develop students' ability to read for speed. Each course meets three or five hours per week.

233-234 Intermediate Aural Media

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Further develops students' listening skills while expanding their vocabulary, especially in the areas of politics and economics. Increases their ability to comprehend details. Each course meets three or five hours per week.

331-332 Advanced Printed Media

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Introduces more complex and analytical articles and editorials from the Arabic press. Further develops students' ability to skim. Each course meets three or five hours per week.

333-334 Advanced Aural Media

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Trains students to take notes while listening to broadcasts. Expands their range of vocabulary and develops their ability to listen to lengthier passages. Each course meets three or five hours per week.

Courses in Translation

241-242 Intermediate Translation

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Translation from English to Arabic. Introduces students to the problem of translating short passages, where they must not only convey information accurately in a

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grammatical form, but must also produce a coherent Arabic text. Each course meets three or five hours per week.

341-342 Advanced Translation

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Develops students' ability to translate a wider range of topics, while producing a smooth, coherent Arabic text. Each course meets three or five hours per week.

Courses in Literature

251 Readings in the Modern Arabic Short Story

Program credit: 2 or 3 hrs. Offered in fall and spring.

Introduces students to the genre through the reading of some representative works.

Course meets three or five hours per week.

252 Readings in Modern Arabic Literature

Program credit: 2 or 3 hrs. Offered in spring.

Selections from a variety of prose writings. Course meets three or five hours per week.

351 Readings in the Modern Arabic Short Story

Program credit: 3 hrs. Offered in fall and spring.

Covers the historical development of style and thought among modern short story writers. Acquaints students with the influence of social factors on the works discussed. Course meets three hours per week.

352 Readings in Modern Arabic Literature

Program credit: 3 hrs. Offered in spring.

Selections from a variety of prose writings. Course meets three hours per week.

353-354 Readings in the Modern Arabic Novel

Program credit: 3 hrs each. Offered occasionally.

Introduces students to the genre through the reading of some representative works.

Each course meets three hours per week.

Courses in Textual Readings

361-362 Modern Arabic Texts

Program credit: 3 hrs each. Offered occasionally.

Exposes students to a wide selection of modern non-fiction, increasing their range of vocabulary and acquainting them with the style of the essay. Each course meets three hours per week.

365-366 Classical and/or Medieval Texts

Program credit: 3 hrs each. Offered occasionally.

Introduces students to the vocabulary and style of classical and/or medieval Arabic.

Each course meets three hours per week.

Courses in Reading the Qur'an

171-172 Readings in the Qur'an

Program credit: 2 to 4 hrs each. Offered in fall and spring.

Introduces students to the Qur'an, its structure, and a selection of its simpler verses.

Addresses basic grammatical issues, while focusing on comprehension, oral repetition, and correct reading. Each course meets three to seven hours per week.

271-272 Readings in the Qur'an

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Introduces a wide selection of verses, thoroughly addressing grammatical and syntactical issues. Trains students to recite with great precision. Each course meets three or five hours per week.

371-372 Qur'anic Studies

Program credit: 3 hrs each. Offered occasionally.

Permits an in-depth reading and discussion of Qur'anic passages in addition to the *tafsir* of some verses. Addresses finer grammatical and syntactical issues as necessary, and refines students' reading and recitation. Each course meets three hours per week.

Courses in Reading in the Social Sciences

281-282 Political Texts

Program credit: 2 or 3 hrs each. Offered in fall and spring.

Acquaints students with the terminology and style of selected political texts. Covers elections, the party system, public policy, etc. Each course meets three or five hours per week.

283 Readings in Economics

Program credit: 2 hrs. Offered in spring.

Acquaints students with the terminology and style of economic texts through the reading and discussion of selected articles on Egyptian and international economic issues. Course meets three hours per week.

381-382 Political Texts

Program credit: 3 hrs each. Offered in fall and spring.

An issue-oriented course which explores the writings of modern political scientists. Each course meets three hours per week.

383 Readings in Economics

Program credit: 3 hrs. Offered in spring.

Exposes students to a wider variety of texts. Focuses on discussion and analysis of the readings. Course meets three hours per week.

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386-387 Modern Egyptian History

Program credit: 3 hrs each. Offered occasionally.

An introduction to Egyptian history, from Muhammad Ali, the founder of modern Egypt, until the present time. Each course meets three hours per week.

Supervised Readings

191-192, 291-292, 391-392 Supervised Studies

Program credit: 1 to 4 hrs each. May be repeated for credit when content changes. Offered in fall and spring.

Study of a selected topic according to the students' level and interests. Each course meets two to seven hours per week.



English Language Institute

Director, English Language Institute: Y. El-Ezabi

Intensive English Program Coordinator: T. Farkas

Intensive English Program Testing Specialist: B. Alfred

English 100 Coordinator: M. Hafez

English Language Teachers: N. Aboul Fetouh, M. Ateek, M. Bishara, C. Clark, A. Demian, S. Esnawi, S. Farag, H. Garas, F. Hassan, M. Ibrahim, M. Iskander, R. Jabr, L. Kamal, F. Kassabgy, N. Kassas, N. Khafagi, S. Makhoulouf, A. Mishriki, L. Moussa, H. Nashed, L. Nessim, M. El Saady, M. Sarofim, A. Shalaby, A. Shebeenie, C. Sheikholeslami, V. Stevens, E. Yoder, M. Osman, Y. Salah Eldin, J. Moos

While the English Language Institute offers the master's and diploma programs in TEFL as described under "Fields of Study," the institute was founded in 1956 to offer intensive English language courses in its Intensive English Program (IEP) to prepare non-native speakers of English for study at the undergraduate and graduate levels in the university. In addition, the institute offers English 100, Academic English for Freshmen, which serves as a bridge between the IEP and the Writing Program.

Intensive English Program

The intensive program for undergraduates offers English 98 (Intermediate English), and English 99 (Advanced English). Students are placed in one of the two levels according to their scores on the AUC English Language Proficiency Entrance Test (ELPET) or TOEFL with TWE.

Undergraduate students in the Intensive English Program (IEP) are allowed to take up to a full calendar year to reach the freshman English level (ENGL 100 or ECLT 101 or 102). For example, students entering the IEP in the spring who do not reach the freshman English level by the end of that semester may attend the summer session and the following fall semester. If at the end of one calendar year a student still has not attained the required freshman level, he/she will be suspended.

Content of Courses

Students are placed in sections normally comprised of up to fifteen students, according to levels of proficiency. Students are given a grammar review, extensive reading and writing practice, advanced vocabulary review, instruction in study skills, and practice in speaking and listening comprehension. Integration among these skill areas is stressed at all levels. Grading in this course is on a Pass/Fail system.

Attendance

Attendance and participation are considered so important to this intensive language program that a student who for any reason misses the equivalent of seven days of class (thirty-five hours) in any one semester will be asked to withdraw. Students who withdraw

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from the IEP may not sit for the AUC ELPET until six months have elapsed from the date of their last examination. Applicants for readmission may not submit a TOEFL (plus TWE) score. If their score is IEP level, they will be allowed to return to the IEP. Students who are asked to withdraw but fail to do so will be suspended.

Suspension

Students who are suspended may apply for readmission with an ELPET score; TOEFL scores are not accepted for readmission.

Academic English for Freshmen (ENGL 100)

English 100 is a concurrent course in which classes meet five days a week for a total of fifteen hours. A student who for any reason misses thirty-six hours (12 days) will be dropped from the course. A student who is dropped will be allowed to retake the course the following semester. Sessions are devoted to the comprehension and summary of university-level texts, the writing of essays on science and humanities topics and remedial grammar within the context of individual teacher-student conferences. Freshmen taking English 100 may enroll in no more than two academic courses with a maximum of 7 academic course credits. Any student who withdraws from English 100 must withdraw from the two other academic courses.

For new students, placement in academic English for freshmen is determined by their score on the ELPET or TOEFL with TWE. For students enrolled in the intensive English program, placement in Academic English for Freshmen is determined by their score on the IEP exit test.

All students who have been admitted into ENGL 100 must satisfactorily complete the course work within a time period not to exceed two full semesters and a summer. Students taking ENGL 100 in summer may not enroll in any academic courses.

STUDY ABROAD, EXCHANGE PROGRAMS & SUMMER & WINTER SESSIONS

Study Abroad and Exchange Programs

Associate Vice-President and Dean of International Students: J. Montassir

The American University in Cairo welcomes international students to study at the university on a visiting basis for a full academic year, semester, summer session or winter term. Sophomores, juniors, seniors and individuals who already hold a bachelor's degree are welcome. Such students pay regular AUC fees in U.S. Dollars. Study abroad/visiting students attend the same classes and are accorded the same student life participation opportunities as regular students. AUC is recognized as an approved overseas study site by numerous U.S. and other institutions worldwide. While 80 to 100 foreign colleges and universities may be represented on campus at any time, a few of the institutions that regularly send students to AUC are Brown, Cornell, Duke, Georgetown, Notre Dame, Northwestern and Tufts Universities, Kalamazoo College and the University of Wisconsin, as well as the University of Bergen in Norway.

Since AUC is both a US-accredited institution, and one recognized by the Ministry of Higher Education in Egypt, students from most universities around the world are able to transfer credits earned at AUC to their home institutions.

Emphasizing the value of inter-cultural and career-enhancement experiences, the University provides a number of study abroad and exchange opportunities with universities in the United States and elsewhere for its own degree-seeking students. The exchange institutions are Pennsylvania State University, the University of California, the University of Colorado, the University of Massachusetts, the University of St. Thomas, the University of Virginia, and the University of Washington as well as Kansai Gaidai University in Japan, Simon Fraser University in Canada, and Bocconi University in Italy. Full details on the exchange program are issued annually by the International Student Services Office. Additionally, the School of Humanities and Social Sciences has a special exchange program with the University of East London, Faculty of Social Sciences, every spring semester.

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To make study at AUC more accessible to students at all public institutions in the United States, AUC provides study abroad students from such universities with financial assistance sufficient to reduce their effective cost at AUC to the out of state semester equivalent tuition rate at their home institution if that is less than AUC's tuition for the same academic period. Information on this assistance and on the study abroad program at AUC is available through the New York Office, and can be accessed on the AUC website www.aucegypt.edu

Summer and Winter Sessions

Director: Vice Provost M. Farag

A large number of students from Egypt and from more than thirty other countries normally attend AUC's summer session. While the majority are pursuing degrees at AUC during the academic year, many students who are not regularly enrolled at AUC join the summer session from mid-June through the end of July to pursue studies of their own interest.

Students can choose from a wide range of courses which are usually offered during the AUC summer session. Besides those courses that are usually oversubscribed during the academic year, every effort is made to offer courses of special interest to international students, such as Islamic art and architecture, Egyptology, Arab society, and Middle East-oriented courses in history, economics, and management.

Intensive courses at all levels in modern standard Arabic and in Egyptian colloquial Arabic are also offered during the summer session by AUC's Arabic Language Institute. This brings to the AUC campus more students from the United States and other countries to share with Egyptian students a truly international educational experience.

The winter session provides additional opportunities to students from the University and outside to take intensive courses for academic credit. The winter session courses are normally offered during the first three weeks of January.

Extracurricular activities are planned for the students and faculty, including trips and cultural events, such as performances of Arabic music and art shows. An informal athletic program offers basketball, volleyball, tennis, soccer, and table tennis. Seminars and special lectures by distinguished visitors are also an occasional part of the summer and winter sessions.

Housing, board, medical, and other university services are provided on the same basis as during the academic year.



GRADUATE STUDIES

TO YOU OF AUC WE GIVE THIS FOUNTAIN IN MEMORY
OF OUR SIX SPENTFUL YEARS HERE 1963-1968
1963-1968

ADMISSIONS

The university seeks to attract to its graduate programs excellent students who demonstrate the ability to do creative and original work. A graduate applicant must have an acceptable bachelor's degree with a record at the required level as mentioned below, be proficient in the English language, be in good health, and perform well on any required entrance examination. As space is limited, actual acceptance depends upon the overall merit of the applicant's academic record and the number of students that can be accommodated.

Graduate Admissions

A graduate applicant must complete an application for admission, including all requested materials such as transcripts, personal statement, experience, medical certificates, etc. A file for each applicant is prepared by the Office of Graduate Admission to ensure that the applicant meets the minimum university requirements as described by the university catalog. The file is then sent to the appropriate department for recommendation. After examining the file, the department forwards it with recommendation to the dean of the school, who will send the file with decision to the Office of Graduate Studies and Research (OGSR) for review. A letter is sent out to the applicant giving the type of admission, advising and registration dates, and the required fees. The files of those applicants who enroll at AUC are sent to the Office of the Registrar by the second week of the term for which they enroll.

The OGSR prepares and prints the Graduate Application Form to be distributed through its outreach efforts.

Criteria for Admission of Graduate Students

The university requires the following minimum standards in admitting graduate students. Actual admissions for a given program may be at a higher level as specified by the department.

Qualifications

Applicants for graduate study must have an acceptable bachelor of arts or bachelor of science degree with an academic record at a level sufficient to qualify for full or provisional

admission as described under “Categories of Admission” below. Additional criteria such as the following may also be considered when evaluating a candidate for admission to the graduate program:

- a. Performance as non-degree student showing evidence they are prepared for graduate level courses.
- b. Test scores (GRE, GMAT, etc.) that suggest potential.
- c. Maturing time since undergraduate experience.
- d. Work experience in a field related to the program applied for.
- e. Strong faculty advocacy with written intent to mentor the student.
- f. References from instructor and/or employer speaking to motivation and maturity.
- g. Personal interview.

English Language Proficiency

An applicant must demonstrate a knowledge of English adequate for graduate study in that language. For full admission to the University, a graduate applicant must attain the required score on either the AUC ELPET examination or the TOEFL (with TWE) examination. An applicant may be exempted from these examinations if he or she is currently enrolled in, or a graduate from an accredited university where the language of instruction is English. An applicant who does not attain the minimum test score but who is otherwise qualified for admission is placed in an English Language Institute (ELI) course for further language study. Please refer to “Who Needs to Take an English Language Proficiency Test” at the end of this section.

Computer and Library Skills

Graduate students may be asked to demonstrate a minimum competency in use of computers and academic libraries as they relate to graduate study and research.

Entrance Examination

The department of major may require applicants to sit for a graduate entrance examination, such as the Graduate Record Examination (GRE) and the Graduate Management Admission Test (GMAT), whose results will be considered at the time of admission.

Medical Examination

A recent medical report stating that the student is physically and mentally capable of doing university work should be submitted with the application.

Medical Insurance for Non-Egyptian Applicants

It is recommended that non-Egyptian students have health and accident insurance which will cover them while they are in Egypt. In addition, all non-Egyptian students are required to enroll in the medical insurance service plan offered by the American University in Cairo which provides for limited care at a specified hospital in Cairo. Exemptions are made only for those non-Egyptian students who reside in Cairo with their families, or who are provided for by their companies, embassies or sponsoring agencies in Cairo. The medical service fee will be announced by the Office of Student Financial Affairs every year.

Categories of Admission

There are two categories of graduate admission, depending upon the qualifications of the applicant.

1. Full Admission

Full admission may be granted to entering students who have met any of the following requirements:

- a. A B.A. or B.S. degree with an overall grade-point average (GPA) of at least 2.75 or its equivalent, and 3.0 or its equivalent in the major.
- b. An overall average of *gayyid giddan* on a B.A. or B.S. degree from an Egyptian national university.
- c. A graduate degree with a minimum overall average of *gayyid giddan* or 'B' if the degree is closely related to the intended major.

Additionally, the department of the major may require satisfactory performance on an examination. *Full admission* may also be attained by fulfilling the conditions specified under the *provisional admission* category below.

2. Provisional Admission

Provisional admission is granted to those entering students not qualifying for full admission but who have additional attributes that give them a high potential for success in a given graduate program.

Under provisional admission a student may be required to take a number of specified prerequisite courses. Students are required to achieve a 'B' average in these prerequisite courses or their admission at AUC will be discontinued. In some instances, students may not be required to fulfill any prerequisites while on provisional status; however, in this case they are considered on probation and must achieve a minimum 'B' average in the first semester (or two graduate courses) or they will be dropped from the program.

Graduate Diploma Programs

The university offers several graduate diploma programs for which the bachelor of arts or bachelor of science degree and a high grade-point average are normally prerequisites, but for which individual maturity, in-service training, or experience may provide an even more valuable background.

When recommended by program faculty, students may be accepted for diploma programs without commitment or expectation of future admission for a master's degree.

Only applicants holding bachelor of arts or bachelor of science degrees may be accepted for prospective award of diplomas.

Non-degree Admissions

An applicant not seeking an AUC degree but who wishes to take AUC courses for academic credit may be admitted as a nondegree student if he/she meets the minimum requirements for graduate admission. A number of places are set aside each year for such students, most of whom take a year away from their studies at another institution for study and living experience in Egypt. Since AUC is a U.S.-accredited institution following an American system, students from U.S. universities are usually able to transfer their AUC credits to their home institutions, but they are advised to check in advance. Nondegree applicants follow the same procedures for admission as degree-seeking students and should enclose transcripts of their undergraduate work.

Upon request, the university may approve a change of status from nondegree to degree student. If a graduate nondegree student should become a degree candidate, the department of major will consider accepting credit for courses taken under nondegree status. All academic regulations applicable to degree students will apply retroactively with such change of status.

Other Admissions

Transfer Credit

Upon the recommendation of the student's department to the school dean in consultation with the Office of Graduate Studies and Research and the Registrar, a graduate student may normally receive up to six credits for graduate level work completed at a different university. The course work may not have been used previously to earn another degree. Any request for the acceptance of transfer credit towards an AUC degree shall be carefully considered by the department concerned before submitting a recommendation to the school dean for approval. Two major considerations shall be: relevance to the student's program of study, and time lapse since taking the courses for which transfer credit is requested. Approval of the School Graduate Committee must be received for more than six hours of credit.

Summer Admissions

The University does not usually admit degree students during the summer semester, but exceptional cases may be brought to the attention of the Director of the Office of Graduate Studies and Research for consideration.

Readmission

A student who has withdrawn in good standing and wishes to return to the university after an absence of one or more semesters may apply for readmission. Application must be made before the appropriate application deadline, and the applicant must meet all the admission requirements prevailing at the time of readmission. Readmission is not granted automatically.

Auditing

Those who wish to attend individual classes may apply as auditors; however, they may not sit for final examinations, nor receive academic credit or any university certificate of enrollment. Auditors do not have to meet all requirements for regular admission but must apply to the Office of the University Registrar by the deadlines indicated on the inside front cover of this catalog. Since permission to audit is on a space-available basis, applicants are not permitted to register until after the registration of regular students has been completed.

Who Needs to Take an English Language Proficiency Test

A. New Students

All new applicants who will be enrolling with regular status, or non-degree students who intend to change to regular status, must provide evidence of academic English proficiency prior to enrollment in any course.

B. Exemptions From English Test

Graduate applicants who hold degrees from an accredited English medium university or applicants who have been accepted by or are enrolled in an accredited English medium university are exempted from presenting evidence of academic English proficiency.

C. Transfer Students

All transfer students except those transferring from an accredited English medium university, are required to take the ELPET (or TOEFL with TWE). Rules governing their placement at AUC are as follows:

Applicants who are transferring from another institution will be placed in Intensive English or Academic English or exempted from any further English requirements, based on their scores on the ELPET (or TOEFL with TWE) as described above.

D. Readmission Cases

All applicants for readmission (excluding disqualified or suspended students) must complete an application for readmission. The TOEFL exam with TWE may **not** be used by applicants for readmission.

Students who are suspended because they have not passed Intensive English in two semesters and a summer (or three semesters if a summer course is not offered) are required to take the AUC ELPET, and they must demonstrate a level of proficiency for direct admission to Academic English for Graduates or higher. Students who are

disqualified because they have failed any Academic English module (ENGL 123, 124 or 125) three times are required to take the ELPET and they must demonstrate a level of English proficiency beyond that of Academic English.

**English Level at
Time of Withdrawal**

Lapse of Time

**ELPET
Required**

Completed required
Academic English modules
successfully or satisfied
English requirement

Less than 24 months
More than 24 months

No
Yes

Enrolled in
Intensive English or
Academic English

Less than 6 months
Between 6-12 months

No
Optional

Enrolled in
Intensive English or
Academic English

More than 12 months

Yes



GENERAL ACADEMIC REQUIREMENTS & REGULATIONS

Academic requirements and regulations govern the relationship between the university and its students. Students must complete the general academic requirements described below as well as those listed under individual degree programs (described in the next section) in order to obtain an academic degree.

The academic regulations described in this section are effective at the time of publication. The university reserves the right to modify them, in which case changes will be announced when necessary. The student is responsible for being aware of all academic regulations. Current university regulations apply regardless of the regulations in effect at the time a student entered the university, except where current regulations specifically state the contrary.

Graduate Academic Requirements

The university has established the following general requirements which apply to all students working toward a graduate diploma or a master's degree. Specific requirements for each degree program are described under the relevant "Fields of Study."

The degree programs described represent the core of the university's wide range of academic and service activities. The university also conducts significant programs in research, training, and adult education, which are briefly listed in a separate section of this catalog and in more detail in other publications. Nondegree, intensive language programs in English and Arabic are described in the "English and Arabic Language Programs" section.

Adviser

Upon entering the department of major, the student will be assigned an academic adviser who will provide counsel concerning degree requirements, course offerings, preparation for the comprehensive examination, and selection of a thesis topic and adviser. When a thesis topic and adviser are selected and approved, the thesis adviser then also becomes the academic adviser.

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Residence

For the master of arts or master of science degree, the minimum requirement is 24 credit hours in residence and an acceptable thesis—normally two years of full-time academic work. Additional courses are assigned in lieu of the thesis if it is optional. The normal course load is 9 hours per semester. Upon the recommendation of the department concerned, students may register for up to 15 hours per semester, at an extra tuition charge. Students unable to carry a full course load may be permitted to take more time to complete their degree; however, they must complete all requirements, including the thesis, within five years of the date of first registration as a provisional or fully admitted graduate student. Students enrolling in the M.B.A. program must complete all requirements within six years of their provisional or full admission to the program.

The residence requirement of five or six years mentioned above does not include the period of enrollment in the English Language Institute.

Comprehensive Examination

A student may sit for a required comprehensive examination after completing 24 credit hours or while taking the final six credit hours. Comprehensive examinations are offered usually in mid-December and mid-April. Students not registered for courses or thesis hours and planning to sit for the comprehensive examination in any semester must register for comprehensives in that semester and pay tuition equivalent to one graduate credit hour.

Thesis Requirements

Most master's degree programs require a thesis. Exceptions to this requirement are noted in the descriptions of the individual programs.

The student is responsible for selecting and developing a thesis topic which has departmental approval and for which a qualified adviser is available. In consultation with the adviser, the student must submit a thesis proposal (normally 1500 words in length) for consideration by the department. As soon as the proposal is approved, the student may proceed with thesis research and writing. Copies of the proposal approval document must be kept in the department of major and forwarded to the Office of the University Registrar.

After completion of coursework, the student must register for 599 Research Guidance and Thesis each semester, and pay tuition equivalent to 3 credit hours each semester starting with the semester in which he/she plans to submit the thesis proposal, until completion of the thesis. A student who does not complete the thesis requirement within the period of two semesters (or three semesters in the case of economics majors) will be charged a fee equivalent to one graduate credit hour for each additional semester of thesis registration.

The thesis must be written in English and typed double-spaced. It will be judged on content, organization, documentation, and presentation. Guidelines on thesis writing

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and format are available at the department of major and the Office of Graduate Studies and Research, and the graduate studies website.

Submission of Thesis

If the degree is expected at the end of the first semester, an acceptable (adviser-approved) thesis must be presented by November 15. If graduation is expected at the end of the second semester, the deadline for submitting the thesis is April 15. Each student is advised to submit the thesis early to allow time for the revisions which may be required; otherwise, awarding of the degree may be delayed.

Within three weeks of submission of the thesis, the candidate will meet with the committee appointed by the department for an examination of the thesis. The committee may include members from outside the department or outside the university.

All revisions required by the committee must be incorporated in the final copy. The committee members may consider the revised thesis individually or schedule another meeting with the candidate.

The top copy of the accepted and signed thesis is submitted to the Dean's office at least two weeks before commencement. If the thesis is submitted late, the degree will not be conferred that semester.

Graduate Academic Regulations

Registration

Students must register during the official registration period at the times announced in the university calendar. They should plan their courses with their advisers prior to registration and follow the instructions contained in bulletins issued by the Office of the University Registrar or on the Registrar's Web site. Those seeking to enroll after the scheduled registration period cannot be guaranteed acceptance. If permitted to register, they will be charged a late registration fee. For foreign students, registration must be completed before a student visa can be issued.

Change of Courses

If careful attention is paid to the degree requirements and course offerings, there should be minimal need for course changes after registration has been completed. Any student who desires a change must first obtain a change of course form from the department of major and have it approved by his/her adviser and the chair of the department of major. The student must submit the form personally to the Office of the Registrar. Change of courses can only take place during the first two weeks of a regular semester and during the first week of a summer session.

- No other course may be substituted for a required course unless university action requires that the change be made.
- A course may not be added to the student's schedule after the registration deadline.
- Students may drop classes up to the end of the fourth week of classes in an academic semester or the summer session, with no record being maintained.
- Between the end of the fourth and the twelfth week of classes in an academic semester, students may drop courses. A grade of "WP" will be assigned to students whose performance is evaluated by the professor as "B" or above, or a grade of "WF" will be assigned to those whose performance is evaluated as less than "B".
- After the twelfth week in academic semesters and the fourth week in the summer session, students are not permitted to drop classes.
- Students will receive a grade of 'F' if they stop attending classes without officially dropping the course.

Credit Hours

Coursework is counted in credit hours. In general, a credit hour represents a one-hour class period and at least two hours of individual study each week for one semester. Thus a course of three credit hours would meet for three hours a week and the student would be expected to study for at least six hours outside of class.

Academic Load

The normal program of study for a full-time graduate student is nine hours per semester; however, upon the recommendation of the department concerned, a student may register for up to fifteen hours per semester. A graduate student taking a load of less than nine hours is considered a part-time student. A foreign student carrying a full academic load is entitled to university certification for obtaining a student visa. Foreign graduate students carrying less than a full load are not entitled to such certification unless they are fellows or sponsored students. In case of withdrawal, the university reports to the Egyptian authorities to cancel the student residence visa that was received through the university.

Grades

At the close of the semester students receive a final grade in each course. The grade is the professor's official estimate of the student's achievement as reflected in examinations, assignments, and class participation. The final grades are recorded on the student's permanent record at the Office of the University Registrar. The grade may not be changed or removed from the record.

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The following grading system is used at the American University in Cairo:

Grade	Points	Description
A	4.0	Excellent
A-	3.7	
B+	3.3	Very good
B	3.0	Good
B-	2.7	
C+	2.3	Conditionally passing
C	2.0	
F	0.0	Failing

Grades not included in the Grade Point Average:

I	Incomplete
S	Satisfactory
U	Unsatisfactory
W	Withdrew
WP	Withdrew-Passing
WF	Withdrew-Failing
AU	Audit
IP	In progress
P	Pass

The grade point average is calculated by multiplying the grade point value by the number of credit hours the course represents. The result is listed as quality points. The total quality points are then divided by the total credit hours. The results in courses for no credit are not included in the computation of a grade point average. Grades of "I", "S", "P", "U", and "WF", "WP" are not assigned grade point values and are not used in the computation of the grade point average. Decimals beyond two places are truncated, not rounded up, in computing the grade point average.

Dual Graduate Degrees

Graduate students may pursue two distinct graduate degrees (diploma and MA/MS or Two MA's/MS's) in different majors, either simultaneously or consecutively. In either case, the student must apply to and be accepted by each program involved. The student may have up to 12 credit hours accepted for credit in both degree programs contingent upon departments' and deans' approval. In the case of simultaneous programs, the student may request prior approval of the courses to be counted towards both degrees from the departments involved. In the case of sequential degrees, a period of up to five years is allowed between the dates of finishing one degree and starting the second. Acceptance of a course towards the new degree shall be contingent upon departmental and dean's approval.

Incomplete Work

Under some circumstances graduate students who are unable to complete a course may be permitted to continue and complete it in the following semester. In the meantime a grade of "I", meaning that the work is incomplete, is assigned in the course.

Students, whether registered or not, are responsible for making arrangements with the professor and the department of the major to complete the course in the following semester, otherwise, a tentative grade estimated on the basis of work already completed will be recorded. Failure to complete the course within the following semester will result in the grade being recorded as "F" unless a tentative grade has been previously reported. Meanwhile, students are not allowed to register for the same course.

The incomplete grade 'I' will appear on the student's record along with the final grade received upon completion of outstanding work.

Any instructor submitting an incomplete grade must supplement this submission with a form to the Office of the Registrar (copies to the instructor and the student) giving the following information:

- a. Reason for the incomplete.
- b. The material which is lacking.
- c. Action necessary for removal of the incomplete.

The instructor will also inform the University Registrar, on the same form, of the grade the student will receive if the outstanding work is not completed on time. This grade is to be submitted to the registrar at the time of submitting the incomplete grade sheet.

Students who have an incomplete grade are not allowed to carry more than twelve credit hours a semester including the incomplete course or courses.

Students on warning who receive an incomplete are not permitted to register the following semester unless they have completed the coursework of the previous semester.

Probation, Dismissal and Course Retake

If the student's grade point average falls below "B" either in graduate work or in prerequisite course requirements, he/she will be placed on probation for one semester, during which time he/she must regain a "B" average.

Students who receive an "F" in any course will normally not be allowed to continue in the university (please refer to the course repeat policy in the following paragraph); a student may also be dismissed from the university if he/she does not complete all requirements within the period specified under 'Residence'.

With the recommendation of the department and the approval of the school dean, a

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graduate student may be allowed to repeat one course in which a grade of "B-, C+, C or F" is received, except if the "F" grade is received for academic dishonesty. This privilege may be exercised only once. With the recommendation of the department and approval of the school dean, substitution is allowed for an elective or an infrequently offered course. Both the original grade and the new grade will appear in the transcript but only the new grade will be used in calculating the GPA.

Planned Educational Leave of Absence

Students at The American University in Cairo may apply for a Planned Educational Leave of Absence. A Planned Educational Leave of Absence is defined as a planned interruption or pause in a student's regular education during which the student temporarily ceases his or her formal studies at AUC while pursuing other activities that may assist in clarifying the student's educational goals. The intent of the policy is to make it possible for a student to suspend his or her academic work, leave the campus without jeopardizing his or her rights and privileges, and later resume his or her studies with a minimum of procedural difficulty. A student who is approved for a planned leave will be considered as maintaining his or her status as a continuing student.

Planned educational leaves may be granted for a variety of reasons or projects, but certain characteristics must be contained in any request for a leave:

- The leave must have a definite purpose relevant to the student's overall educational objectives and goals.
- The request must be for a specific period of time which should not exceed 2 regular semesters for students pursuing a graduate program.
- The student must plan to return to AUC at the conclusion of his or her leave.

The following regulations apply to the planned educational leave:

1. An application for a Planned Educational Leave of Absence and additional information can be obtained from the Office of the University Registrar or the Registrar's web site.
2. The student must obtain the approval of his or her faculty advisor, the department chair of his or her major.
3. The student should be in good academic standing at the time of the leave request. The leave application must be submitted to the Office of the University Registrar by the start of the final examination period of the semester immediately preceding the requested leave. The Office of the University Registrar will notify the leave applicant of the status of the request after all of his or her final grades have been submitted.
4. The student may cancel a leave of absence as late as the first day of classes of the term for which the leave has been requested. However, the deadlines for payment of the term bill and the penalties for late payment apply in such cases.
5. A degree student who discontinues active enrollment in degree studies without being granted a leave of absence, or a student granted a leave who does not return to active study at the close of the period of approved absence, will be considered to have withdrawn from the University and must apply for readmission and be subject to the regulations and requirements then in force.

6. The right to use university facilities is suspended while the leave is in effect, with the exception of library privileges subject to the approval of the department of major.
7. A Planned Educational Leave of Absence is counted as part of the time limitations. A student returning from an approved leave remains under the requirements of the catalog that he or she was following upon his/her first registration into the program.
8. Any academic credit during a Planned Educational Leave of Absence is accredited by AUC only if permission is granted in advance by the University Registrar and the department of major.

Withdrawal from the University

Students who are unable to complete a semester because of illness or other emergency may be given permission to withdraw. They must get a withdrawal form from the Office of the University Registrar, obtain signatures as indicated on the form, and return the completed form to the Office of the University Registrar. The deadline for withdrawal from the university is one week prior to the last day of classes.

Withdrawal grades will be recorded for each course at the time the student receives permission to withdraw. The grades are either "WP", meaning that the student was doing satisfactory work at the time of withdrawal, or "WF", meaning that the student was not doing satisfactory work at the time of withdrawal. No academic credit is given for courses from which a student withdraws.

A student who withdraws from the university and later wishes to return must apply for readmission. Readmission is not granted automatically. (See the "Admissions" section of the catalog.)

Transcripts

Students who graduate or who withdraw from the university in good standing are entitled to one free student transcript of their academic record. No transcript of academic record will be issued during the examination, registration, or graduation periods. Academic transcripts will not be issued when unsatisfied financial obligations to the university exist.

Non-degree Academic Regulations

Since non-degree students are usually seeking credit for transfer to other institutions, not all of the academic regulations in this section are applicable to them. They will be primarily concerned about the academic regulations of their home institutions to ensure that they receive maximum possible credit for their work at AUC. Non-degree Students who wish to transfer credits to their home universities should check these universities policies before coming to Cairo.

Non-degree students should note the sections pertaining to registration, change of courses, academic load, grades, warning, incomplete work, class attendance, and transcripts in the graduate section, as appropriate.

STUDENT FINANCES

Tuition and Fees

Tuition and fees for the academic offerings are announced for each academic year in a bulletin from the Office of Student Financial Affairs. AUC's tuition for 2005-2006 is \$13,500 per academic year for 9 graduate credit hours per semester, with additional charges for additional credits. In recent years, tuition has risen from five to ten percent annually. Such increases are likely to continue in the future.

Non-Egyptian students pay full tuition for 9-12 graduate academic credit hours. Egyptian students and permanently resident non-Egyptian students are given a subsidy that provides them with reduced actual rates. The value of such subsidy could vary from year to year and is normally announced by mid-May of the following academic year. In 2005-2006 the actual tuition rate for Egyptian students and permanently resident non-Egyptian students receiving such subsidy is L.E. 27,500 per academic year for 9 graduate academic credit hours per semester and L.E. 32,500 for MBA major, with additional charges for additional credits.

Tuition and fees are collected by semester and must be paid before registration. No student with bills outstanding, including charges for breakage or library fines, will be admitted to any examination, be given any certificate or report of academic standing, or be permitted to register for a subsequent semester.

Deferred Payment

When a student is unable to pay the entire amount due at the time of registration, the Director of Student Financial Affairs may approve payment in two installments as follows:

- a. At least 50 % percent to be paid at the time of registration.
- b. The balance must be paid by November 25th for deferment of fees granted for the fall semester and April 5th for deferment of fees granted for the spring semester.
- c. The student will pay an administrative fee that will be decided every year.

- d. New students who apply for financial aid will be exempted from the administrative fees for deferment of payment.

Refund Policy

A full refund for graduate students is made only for course(s) dropped before the end of the late registration period. Students who drop a course after the deadline for late registration are not entitled to any refund for the course(s) dropped. However, students who withdraw from the university after the deadline will receive a partial refund, the amount depending on the number of weeks which have elapsed since the beginning of classes. Refunds are made according to the following schedule:

- First week of classes: full tuition refund
- Second week: eighty percent tuition refund
- Third week: sixty percent tuition refund
- Fourth week: forty percent tuition refund
- Fifth week: twenty percent tuition refund
- After the end of the fifth week no refunds will be made

Summer-session students who withdraw one day after registration can be refunded the amount paid. Summer session students who withdraw more than one day after registration will receive a partial refund according to the following schedule:

- By the end of the first week: seventy five percent of tuition and fees
- By the end of the second week: fifty percent of tuition and fees
- After the end of the second week no refunds will be made

The refund schedule refers to tuition for credit courses, audited courses, and instruction in the Arabic Language Institute and English Language Institute. The student services and activities fee, the application fee, laboratory and studio course fees, and special charges are not refundable.

Financial Assistance

Although the American University in Cairo is a private university that depends upon tuition and contributions for its livelihood, it attempts to provide financial assistance to any student not on probation who demonstrates financial need. AUC offers a range of fellowships, financial aid, and student work programs to assist students in meeting the expenses of their education.

Financial Aid and Work Study for Graduate Students

The financial aid and work study programs at the American University in Cairo are designed to provide financial assistance in the form of a grant or student work to

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graduate students attending AUC. Financial aid or work study only cover part of a student's tuition at the university.

Financial Aid

In addition to the tuition scholarships that Egyptian students receive, approximately twenty five percent of Egyptian graduate students have received additional financial assistance in recent years.

The university also offers a few financial aid awards for non-Egyptian graduate students on the basis of a distinguished academic record and of individual financial need.

Eligibility

In order to be eligible for financial aid or work study, students must meet the following criteria:

- a. Financial need established through the financial aid form.
- b. Accumulated grade point average of not less than 3.0.

Selection

The University Financial Aid Committee will make awards and establish student assignments for the fall and spring semesters. A student applying at the beginning of the academic year may receive financial or work study for the fall semester with automatic renewal for the spring semester upon submission of a renewal form. A student applying in the spring semester may receive financial or work study for one semester only.

Awards and Renewal

Financial aid grants or work study will be determined according to student or family financial resources, as appropriate, within university budget limitations. Financial need is defined as the difference between the costs of attending the American University in Cairo and the amount a student or family can contribute toward those costs. Aid may include both grants and part-time student work.

AUC will provide financial or work aid on application to continuing recipients who remain eligible and continue to demonstrate financial need. The amount and kind of aid a student receives will be reviewed each year so that any changes in fees and in family resources can be taken into account. Students are normally responsible for reporting the changes in their or their family's financial resources. A students' award may increase, decrease, or remain the same from year to year, depending upon university costs, the family's current financial ability, and university approval. Normally, students on probation are not eligible. Graduate students must submit a renewal form every semester if they wish to renew their financial aid awards.

Students who wish to apply for financial aid or work study must submit the university's financial aid form with required supporting documents to the Office of Student Financial Affairs by the deadlines shown below:

Category	Period of Support	Deadline
New Students	Academic Year	Sept. 15
Returning Students	Academic Year	May 15
New Students	Second Semester	Dec. 31
Returning Students	Second Semester	Dec. 15

Work Study Program

Part of the financial aid program is made available through work assignments for students on campus which assist them financially, provide them with educational experience, and help develop their skills. Details on the work study program including areas of work, compensation and applications are announced through the Office of Graduate Studies and Research; assignments are also made and supervision exercised by that office. Administrative procedures are made by the Office of Student Financial Affairs.

Graduate Fellowships and Assistantships

The University offers graduate students a wide range of fellowships and assistantships in order to help them in financing their education. For more details about such awards, please refer to the Office of Graduate Studies and Research or your department of major. Following is a brief description of each of the graduate awards that are currently offered:

African Fellowships

African graduate fellowships are offered to qualified applicants from African countries (not including Egypt) who wish to pursue full-time study in the master's program or graduate diploma in Forced Migration and Refugee Studies at the American University in Cairo. Fellowships are awarded for a maximum of two academic years and the intervening summer session. Students taking longer to complete their degree will be expected to pay tuition for subsequent work. Candidates must have an appropriate undergraduate degree with a minimum overall grade point average of 3.0 on a 4.0 scale, or equivalent. The award is contingent upon full admission into the graduate program at AUC.

African fellows receive a tuition waiver, graduation fees, a monthly stipend paid in local currency, non-residents receive a monthly housing allowance, and medical service and health insurance. As part of their fellowship and in support of their professional training, fellows are assigned 18 hours per week of related academic or administrative work. Applications for admission, and the required supporting documents are due at the Office of Graduate Studies and Research at AUC no later than December 15 for fellowships beginning in September. Selection of the fellowship is made in April.

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Arabic Language Fellowships

The Arabic Language Fellowships are offered to full-time international graduate students who need to take Arabic language classes in order to satisfy their degree requirements at AUC and would like to enroll in Arabic Language Credit Courses (ALNG) during the academic year or in the Arabic Language Institute's (ALI) full-time summer Arabic program.

International graduate students, who are fully admitted to the AUC graduate program, may apply to the Arabic language fellowships. The fellowships are awarded for one summer, or one semester renewable once upon the department's recommendation. Arabic language fellows receive a waiver of 50% of the tuition for the ALNG courses or the ALI intensive Arabic summer program. As part of their fellowship and in support of their professional training, fellows are assigned five hours per week of related academic or administrative work. Applications for the fellowship are available from the Office of Graduate Studies and Research or the New York Office, and must be received by the Office of Graduate Studies and Research by May 31 for the Fall semester, November 1 for the Spring semester and February 1 for the ALI intensive Arabic summer program. Selection of fellowship recipients will be made about one month after each of the deadlines.

Graduate Merit Fellowships

Graduate Merit Fellowships are competitive awards offered to outstanding graduate students who wish to pursue full-time study in one of the graduate programs at AUC. Applicants who are fully admitted to one of the graduate programs at AUC and who have a B.A. or B.S. degree with a minimum overall grade point average of 3.4 on a 4.0 scale and a minimum grade point average of 3.5 in their major, or a grade of "Very Good" in their final year from one of the national universities may apply. Students already enrolled in one of the graduate programs and who have a minimum grade point average of 3.7 in their graduate courses are also eligible to apply.

The fellowships are awarded for one year, renewable for a second year. Fellows receive a waiver of tuition and fees of about L.E. 27,500 per year and a monthly stipend paid in local currency. As part of the fellowship, and in support of their professional training, Merit Fellows are assigned 18 hours per week of related academic or administrative work. Applications for the fellowship are made to the school dean in May, selection is made by the School in June and the fellowship starts in September.

International Graduate Fellowships in Arabic Studies, Middle East Studies and Sociology-Anthropology

International graduate fellowships are offered for two academic years and the intervening summer session to international students who wish to pursue full-time study in the master's program in Arabic Studies, Middle East Studies or Sociology-

Anthropology at the American University in Cairo. Candidates must have an appropriate undergraduate degree with a minimum overall grade point average of 3.4 on a 4.0 scale, or equivalent. The award is contingent upon full admission into one of the above graduate programs.

International fellows receive a tuition waiver, a monthly stipend paid in local currency, accommodation in the University dormitory or a monthly housing allowance, and medical service and health insurance. As part of their fellowship and in support of their professional training, fellows are assigned 18 hours per week of related academic or administrative work. Application for admission, application for the fellowship, and recommendation letters are due at the OGSR in Cairo, or the New York Office with notification to the Office of Graduate Studies and Research no later than February 1 for fellowships beginning in September. Selection of the fellowship is made in April.

Laboratory Instruction Graduate Fellowships in Engineering, Computer Science and Physics

Laboratory Instruction Graduate Fellowships are competitive awards offered to outstanding graduate students who wish to pursue full-time study in engineering, computer science or physics. To be considered for the fellowship, the applicant must be fully admissible to one of the above graduate programs and have a B.S. degree with a minimum overall grade point average of 3.2 on a 4.0 scale, or its equivalent. Students already enrolled in one of these graduate programs and who have a minimum grade point average of 3.2 in their graduate courses are also eligible to apply. To retain the fellowship, the recipient must carry a full course load (9 graduate credits) and maintain a grade point average of 3.2 or better. In all cases, an applicant must demonstrate an ability and interest in conducting experimental work and interacting with students in a laboratory environment. Laboratory Instruction Fellows must not engage in other work activities outside the University.

The Laboratory Instruction Fellowship is reviewed every semester and may be renewed for a maximum period of two years. The fellowship may cover a summer session. Fellows receive a waiver of tuition and fees of about L.E. 27,500 per year and a monthly stipend. As part of their fellowship and in support of their professional training, fellows are assigned 24 hours per week of laboratory instruction work. Application for the fellowship is made to the department of major in May, selection is made by the school in June and the fellowship starts in September.

Nadia Niazi Mostafa Fellowship in Islamic Art and Architecture

The Nadia Niazi Mostafa Fellowship in Islamic Art and Architecture is a competitive award offered annually to a second year Egyptian student enrolled in the graduate program in Arabic Studies with a specialization in Islamic Art and Architecture and who wishes to pursue full time study in the program. Students who are fully admitted to the graduate program in Arabic Studies with a specialization in Islamic Art and

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Architecture and who have completed one year of graduate study in the program (a minimum of 12 credit hours) with a minimum overall GPA of 3.2 on a 4.0 scale are eligible to apply.

The fellowship is awarded for two semesters of full time graduate study. The fellow receives a waiver of tuition and fees of about L.E. 27,500 per year, and a monthly stipend paid in local currency. As part of the fellowship and in support of professional training, the fellow is assigned 12 hours per week of related academic or administrative work. Application for the fellowship is made to the department in May, selection is made by the department in June and the fellowship starts in September.

Sasakawa Fellowships

The American University in Cairo is proud to be one of 68 universities worldwide offering the Ryoichi Sasakawa Young Leaders Graduate Fellowships. This highly selective scholarship program covers tuition, academic fees, medical service and health insurance (for international students), a textbook allowance and a monthly stipend (if funds are available) for two years of full-time graduate study at AUC in the social sciences or humanities.

The primary objective of the Sasakawa fellowship program is to educate outstanding young men and women who have demonstrated a high potential for future leadership in international affairs, public life and private endeavors. For the 2005-2006 program, three graduate students (Egyptian and international) will be selected from applicants who will start or are currently enrolled in the graduate program at AUC.

The award is contingent upon full admission of the applicant into one of AUC's M.A. programs in the humanities and social sciences. Faculty members are encouraged to nominate eligible students for the fellowship. All applicants (Egyptian and international) must submit an application for admission and fellowship application, recommendation letters and a covering letter specifying the name of the fellowship to the OGSR in Cairo, or the New York Office with notification to the Office of Graduate Studies and Research by February 1st. Selection of fellowship recipients will be determined by the AUC Sasakawa Committee and announced in April. Scholars will begin their coursework in September.

Sheikh Kamal Adham Fellowships

This fellowship is awarded annually to one qualified graduate student who is a candidate for the Graduate Diploma in Television Journalism in the Journalism and Mass Communication department. In return, the fellow will serve as assistant in the Adham Center for 80 hours per month during the academic year, assisting in the Center's projects and research under the supervision of the Center's Director.

Selection is made by the Director of the Adham Center for Television Journalism on

the basis of financial need and academic performance. Professional experience is also considered where applicable.

The grant's duration is one year. For additional information, contact the Assistant to the Director of the Kamal Adham Center for Television Journalism.

Teaching Arabic as a Foreign Language Fellowships

Fellowships are offered in the Arabic Language Institute for two academic years and the intervening summer session to full-time students wishing to earn a master's degree in teaching Arabic as a foreign language and to acquire language teaching experience at the American University in Cairo. Special consideration in selection is given to those with previous TAFL experience and/or excellent qualifications in the Arabic language. Fellows pursue degree study, teach Arabic eight hours per week, and participate in Institute research.

Fellows receive a waiver of tuition and fees and a monthly stipend paid in local currency. International fellows are provided, in addition, with medical service and health insurance. Applications for admission and the fellowship must be received no later than February 1 for fellowships beginning in September.

Teaching English as a Foreign Language Fellowships

Fellowships are offered in the English Language Institute for two academic years and the intervening summer session to full-time students wishing to earn a master's degree in teaching English as a foreign language and to acquire language teaching experience at the American University in Cairo. TEFL/TESL experience in the Middle East and knowledge of Arabic or other languages are considered a plus. Fellows pursue degree study, teach English eight hours per week, and participate in Institute research.

Fellows receive a waiver of tuition and fees and a monthly stipend paid in local currency. Nonresidents of Egypt are provided, in addition, with accommodation in the university dormitory or a housing allowance, medical service and health insurance and one-way home travel. Applications for admission and the fellowship must be received no later than February 1 for fellowships beginning in September.

University Fellowships

The University Fellowships are competitive awards, granted to those who display superior academic performance and promise. Fellows receive a waiver of tuition and fees of about L.E. 27,500 per year and a monthly stipend paid in local currency. As a part of their fellowship and in support of their professional training, fellows work with faculty members in teaching and research activities. To be considered for a fellowship, an applicant must be fully admissible to one of the graduate programs at AUC and have a

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B.A. or B.S. degree with a minimum overall grade point average of 3.2 on a 4.0 scale, or equivalent. Students already enrolled in one of AUC's graduate programs and who have achieved a minimum grade point average of 3.2 in their graduate courses are also eligible to apply. To retain the fellowship, the recipient must carry a full course load (9 graduate credits) and maintain a grade point average of 3.2 or better.

Writing Center Graduate Fellowships

Writing Center Graduate Fellowships are established by the American University in Cairo to provide fellowship recipients with valuable teaching and academic experience and involve them as tutors in AUC's Writing Center. The fellowships are competitive awards offered to outstanding students who wish to pursue full-time study in the graduate program of English and Comparative Literature. To be considered for the fellowship the applicant must be fully admissible to the graduate program in English and Comparative Literature at AUC and have a B.A. degree with a minimum overall grade point average of 3.2 on a 4.0 scale, or its equivalent. Students already enrolled in the program and who have a minimum grade point average of 3.4 in their graduate courses are also eligible to apply. To retain the fellowship, the recipient must carry a full course load (9 graduate credits) and maintain a grade point average of 3.4 or better.

The Writing Center Fellowship is reviewed every semester and may be renewed for a maximum period of two years. The fellowship may cover a summer session. Fellows receive a waiver of tuition and fees and a monthly stipend. As part of their fellowship and in support of their professional training, fellows are assigned 10 hours of work per week in the Writing Center. Application for the fellowship is made to the department in May, selection by the department with approval of the dean is made in June and the fellowship starts in September.

Assistantships

Departments also offer a few graduate assistantships to applicants who have special qualifications. Assistants receive monthly stipends—but not waiver of tuition and fees and assist in teaching, class supervision, and/or research.

Post-Masters Assistantships

The university offers a limited number of post-masters assistantships to candidates who are interested in acquiring advanced professional guidance in improving their academic experience. To be considered for the assistantship, a candidate must have an M.A. or M.S. degree and should be preparing for a Ph. D. degree or receiving academic training. The post-masters assistantship is for one year, renewable once. Fellows receive a monthly stipend and assist faculty members in teaching and/or research activities. Upon request to the Office of Graduate Studies and Research, fellows who are non-residents of Egypt will have guidance in obtaining student or temporary residence visas and medical service coverage.

Fellowship Without Stipend

The university provides institutional affiliation with AUC in the form of a fellowship without stipend for visiting graduate scholars who wish to do research in Egypt and already have a source of funding but who need such an affiliation. The benefits of this fellowship include guidance in obtaining student or temporary residence visas, sponsorship by an academic department, consultation with faculty, access to the library and medical service and health insurance. The fellow must register at AUC for research, pay a research fee equivalent to the tuition of one graduate credit hour per academic year, and agree to the university's regulations regarding responsibility in research and publication. The fellowship does not provide housing or office space.

Acceptance of a scholar as a fellow without stipend is conditional upon the compatibility of his/her research interests with those of an AUC faculty member from a sponsoring department. Additional requirements may be specified such as making an oral presentation of the fellow's research project to a Scholars Seminar sometime during the period of his/her affiliation and presenting the school with a copy of research results such as a copy of the Ph.D. dissertation and/or copies of any published articles.

To apply, the candidate must submit the following: 1) the university's personnel information form and a current resume; 2) a letter of introduction or sponsorship from the applicant's home institution; 3) a research outline, including a description of the research techniques and tools the applicant plans to use in Egypt; 4) a statement describing the source(s) and amount(s) of funding available for the applicant in Egypt; and 5) a recommendation from the AUC faculty member endorsed by the chair of the sponsoring department.

Applications and supporting documents should be submitted to the dean of the appropriate school for final approval.

Other Awards

Center for Arabic Study Abroad

Fellowships are offered to American graduate students for participation in the intensive Arabic language program taught by AUC under the Center for Arabic Study Abroad (CASA) established by a consortium of U.S. universities, including AUC, and funded annually since 1967 by the U.S. Department of Education. Both summer and twelve-month programs are conducted. Students pay a program fee to help cover administrative costs and receive a fellowship covering tuition, maintenance, and travel from and to the United States. Competence in modern standard Arabic equivalent to at least two years of study on the college level is a prerequisite.

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For information and applications contact:
The Director
Center for Arabic Study Abroad
Institute of Comparative & International Studies (ICIS)
1385 Oxford Street
Emory University
Atlanta, GA 30322
<http://www.emory.edu/COLLEGE/casa>

Outside Assistance

Other than the opportunities described above, international students in the past have obtained outside support for work at AUC from the following sources:

1. Rotary Foundation International Scholarships for one year of graduate, or language study. Contact: student's local Rotary Club or Rotary Foundation of Rotary International, 1 Rotary Center, 1560 Sherman Avenue, Evanston, Illinois 60201. <www.rotary.org>
2. Fulbright grants for one year of graduate study are available to U.S. citizens. Contact: student's campus Fulbright Program adviser or Institute of International Education, 809 United Nations Plaza, New York, New York 10017. <www.iie.org>
3. Federal Stafford Student Loans can be used by U.S. citizens or permanent residents for graduate degree study or to earn a certificate in Arabic language (at least one year of intensive study). Pell Grants are not applicable. Degree and certificate students must obtain instructions from the AUC New York office. (e-mail: aucegypt@aucnyo.edu)
4. Veterans Administration educational benefits are applicable to graduate degree study at AUC. U.S. veterans should contact their regional office of the Veterans Administration. Written approval of benefits from the Veterans Administration should be obtained prior to coming to Cairo. <www.va.gov>
5. Canadian students may inquire about AUCC-Foreign Government Awards for graduate study in Egypt at: Association of Universities and Colleges of Canada, 350 Albert Street, Suite 600, Ottawa, Ontario K1R 1B1, Canada. <www.aucc.ca>

STUDENT LIFE

The American University in Cairo occupies an urban campus. Most graduate students live at home with their families, although most international graduate students (about 18 percent of the student body) share furnished apartments or live in university housing.

Graduate student activities and services are promoted by the Graduate Students' Association and supervised by the Office of Graduate Studies and Research within the context of university policy and a constitution approved in 1999 by a student body vote, and authorized by the university's administration.

Activities

The many extracurricular activities available at AUC reflect the diverse backgrounds and interests of its students. While some events are sponsored and organized by departments and units, most are initiated and carried out by student groups.

The Graduate Students' Association

The aim and purpose of the Graduate Students' Association (GSA) is to provide and improve services offered to graduate students at AUC, and establish communication links between fellow graduate students and the rest of the AUC community. All graduate students are automatically members of the Association. The GSA board members are elected annually.

Academic activities of the GSA in conjunction with the OGSR include a series of workshops: thesis and research proposal writing, how to publish in an academic journal, how to apply for a Ph.D. workshop and theory and methodology workshops.

Conferences

Student organized conferences, such as the Model United Nations and Model Arab League (under the auspices of the Political Science Department), and the Annual AUC Research Conference organized by the Office of Graduate Studies and Research, offer the opportunity for students to learn special skills, expand their knowledge, and participate in a major organizational challenge. Graduate students

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may also apply for conference grants for presenting a paper at a recognized professional conference.

Music, Dance, and Art Activities

The Choral Group, Music Group, Egyptian Folk Dance Troupe, and Art Group, along with several other cultural activities groups, are trained by competent professionals on an extracurricular basis throughout the academic year, and perform both on and off the campus. They represent AUC every spring with students of Egypt's other universities in the National University Cultural Activities Competition. Opportunities to represent Egypt and The American University in Cairo at festivals abroad are planned periodically for the Choral and Folk Dance ensembles.

Lectures and Concerts

Lectures held at AUC cover a wide variety of topics and feature scholars, diplomats, political figures, businessmen, and others from the university itself, and from Cairo and abroad. The University's Distinguished Visiting Professor program enables individual departments to host speakers throughout the year. In addition, student organizations invite guest speakers whose lectures are open to the university community.

Musical performances by visiting artists and AUCians are given throughout the year. Concerts feature a wide variety of music including classical and contemporary Arabic music, jazz, and western classical music performed by local groups like the Cairo Symphony, by international ensembles on tour, and by talented students.

Theatre and Film

The AUC Theatre Company, comprised of theatre majors as well as students from other departments, is one of the most active student enterprises on campus. Under the guidance of the Theatre faculty, students from all nationalities act and occasionally design and direct several productions a year ranging from classics to modern experimental theatre. Students also play a major role in constructing sets, costumes, lighting, sound, and make up. Recent plays include Shakespeare's *Macbeth*, Feydeau's *A Silly Goose*, Pirandello's *Six Characters in Search of an Author*, Farag's *Sulayman El Halabi*, Dorfman's *Reader*, Congdon's *Tales of the Lost Formicans*, Sophocles' *Antigone* and Ibsen's *Ghosts*. Productions in English and Arabic. Plays take place in two new state-of-the art theatres in the Falaki Academic Center.

Films are a favorite form of recreation at AUC, and several university units organize regular showings.

Student Publications

Gradnews, the AUC graduate students' monthly publication, is issued by the Graduate Students' Association members through the Office of Graduate Studies and Research. It covers AUC news in English that would be of interest to graduate students

Caravan, the student newspaper, is published weekly, in English and in Arabic, and

distributed on campus without charge. It is both a learning laboratory for students majoring in Journalism and mass communication who receive some academic credit for participation, and a co-curricular activity open to participation by reporters, photographers, and students with writing skills or artistic talent from the student body at large. Over the years many Caravan alumni have become professional journalists in Egypt, elsewhere in the Middle East, and in the West. All student publications activities are guided by faculty advisors.

Sports

The university has limited but intensively used athletic facilities on campus, accommodating basketball, boxing, fencing, mini soccer, table tennis, tae kwondo, tennis, volleyball, wrestling, etc. There are provisions for AUC students to participate in additional sports at clubs in the area, including gymnastics, football (soccer), handball, horseback riding, jogging, rowing, squash, swimming and diving, track and field, and water polo.

Participation is open to men and women. Talented students participate in national competitions and matches with other universities. Beginners' classes in a number of sports are periodically organized, and exercise facilities are open to all students. The Zamalek Student Residence also has an exercise gymnasium to serve residents.

Cafeterias and Services

Cafeterias

The university has cafeterias on the Main Campus and on the Greek Campus. Each serves snacks, sandwiches, drinks, and hot lunches at midday.

Student Center

The university's student center is located in the Wallace Building and includes a lounge, the Student Union office, and the Office of Student Organization Activities.

Fountain Shop

The Fountain Shop, located in the main campus cafeteria, offers souvenir items, tapes, magazines, film-developing service, and other items and services of interest to the AUC community.

Duplicating Services

Duplicating centers which serve the students and the AUC community are located in the cafeteria on the Main Campus and just inside the library gate on the Greek Campus.

Bookstores

Textbooks and a broad assortment of general books may be purchased in the Hill House Bookstore on the Main Campus. A smaller general bookstore, open to the public, is located in the Zamalek Student Residence.

Housing

The Zamalek Student Residence provides accommodation for 300 students with separate sections for men and women. Linen is provided and shuttle transportation included. Meal and laundry service are also available. Applications for housing must be filed with the Student Housing Office.

Orientation, Counseling and Health Services

An orientation program for new students covers the academic and extra/co-curricular activities at the university. Additional orientation for international students focuses on cultural opportunities, adjustment to Cairo, special procedures, etc.

The university employs qualified counselors at the Student Counseling Center to assist students with personal difficulties and growth issues. The International Graduate Program Coordinator is available for ongoing orientation and counseling of international graduate students. The university physician and counselors refer students to professional help outside the university when necessary.

The university clinic, with the university physician and trained doctors and nurses in attendance, is open every day, except for Fridays and Saturdays, to provide medical services. The clinic is open from 8:00 a.m. till 5:00 p.m. A qualified nurse is available after 3:30 p.m. and till 5:00 p.m. The university provides limited accident insurance for all students while they are on the campus or engaged in certain university activities. Medical costs beyond the provisions of this insurance must be paid by the student. International students are required to have health insurance coverage.

Student Conduct

The American University in Cairo is a guest in Egypt with a purely educational mission. It encourages open study and examination of all intellectual subjects in its academic work. Both its curriculum and extracurricular activities are dedicated to helping produce informed and independently-minded human beings. But as a matter of basic policy AUC carefully refrains from involving itself in political or religious issues, and it does not permit its campus or facilities to be used by outsiders, by AUC personnel, or students for such involvement. The AUC Board of Trustees does not take positions on political or religious matters, nor are any AUC bodies or entities permitted to do so. The university approves humanitarian assemblies, provided authorized procedures are followed.

Students who attend the university are expected to show concern for each other, for their teachers, and for the university itself. Student behavior is expected to be appropriate to life at an academic institution and to take into account Egyptian society and traditions. Rules of student conduct, intended to perpetuate and reinforce these policies, are explained more fully in the Student Handbook and other student information materials.

Because of the importance of maintaining the complete integrity of its academic work and of ensuring that AUC remains a purely academic apolitical institution, respected in the community at large and maintaining its liberal education atmosphere, the university views the following violations of AUC policy with special seriousness:

- I. Cheating (see Academic Integrity Policy under Undergraduate Academic Requirements).
- II. Involvement in political or religious issues or activities on the campus or in the dormitory or the instigation of or participation in such unauthorized activities.
- III. Behavior that disturbs university functions and activities.
- IV. Participation in any illegal activity, on or off campus.
- V. Face veiling "niqab" in any form on university premises or at any university events.

Students violating standards of conduct, particularly those mentioned above, may be subject to disciplinary action, including dismissal.



Main Campus

FIELDS OF GRADUATE STUDY: ACADEMIC DEGREES & COURSE LISTINGS

How To Use This Section

Degree Listings

This section of the catalog lists the graduate academic fields in alphabetical order.

Course Listings

The following are the departmental prefixes used in labeling courses:

Accounting	ACCT
Anthropology	ANTH
Arabic Language	ALNG
Arabic Language Intensive	ALIN
Arabic Studies	ARBS
Arabic Writing Courses	ALWT
Composition & Rhetoric	RHET
Computer Science	CSCI
English & Comparative Literature	ECLT
English Language Intensive	ELIN
Economics	ECON
Engineering	ENGR
English	ENGL
European Studies	EUST
Finance	FINC
History	HIST
International Human Rights Law	IHRL
Journalism and Mass Communication	JRMC
LL.M. in International & Comparative Law	LAW

FIELDS OF STUDY / GRADUATE 375

Management	MGMT
Management of Information Systems	MOIS
Marketing	MKTG
Middle East Studies	MEST
Operations Management	OPMG
Physics	PHYS
Political Science	POLS
Public Administration	PADM
Sociology	SOC
Sociology/Anthropology	SOC/ANTH
Teaching Arabic as a Foreign Language	TAFL
Teaching English as a Foreign Language	TEFL

Not all departmental prefixes represent fields in which a degree is offered; some represent only courses.

Courses numbered 500-599 are open to graduate students; however, a senior student who has a B average may take two graduate courses, not exceeding six credits, either for graduate credit or for completion of requirements for the bachelor's degree. In this case the chair of the department concerned must notify the registrar's office.

Note Concerning Course Schedules

Most course descriptions indicate the semester in which each course is usually offered, but this information is subject to change and many courses are not taught every year. The registrar's office distributes a detailed schedule of courses offered at the beginning of each semester which contains accurate information on which courses are offered, at what time, and by whom they are taught.

For long-term planning, students should consult their advisers and/or individual departments for help in designing their programs of study. Students coming from the United States, especially year-abroad students, should contact the university's office in New York for current information about specific course offerings.

GRADUATE PROGRAMS

This section describes the graduate programs currently offered in the American University in Cairo. The programs are presented according to the following alphabetical order:

Accounting

See Management for description

American Studies

Graduate Diploma

(to be launched in fall 2006)

Anthropology

See Sociology-Anthropology for description

Arabic Language

Courses-See Arabic Language Institute for description

Arabic Language and Literature

See Arabic Studies for description

Arabic Studies

M.A.

Business Administration

MBA - See Management for description

Comparative Literature

See English and Comparative Literature for description

Comparative Politics

See Political Science for description

Computer Science

M.Sc. & Graduate Diploma

Construction Engineering

See Engineering for description

Design

See Engineering for description

Economics

M.A.

Economics in

International Development

M.A. & Graduate Diploma

Engineering

M.Sc. & Graduate Diploma

English Language Intensive Courses

See English Language Institute for description

English and Comparative Literature

M.A.

Environmental Engineering

See Engineering for description

European Studies

Graduate Diploma

Finance

See Management for description

Forced Migration and

Refugee Studies

Graduate Diploma

Industrial Engineering

See Engineering for description

International & Comparative Law

LL.M. - See Law for description

International Human Rights Law

M.A. - See Law for description

International Relations

See Political Science for description

Islamic Art and Architecture

See Arabic Studies for description

Islamic Studies

Graduate Diploma- See Arabic Studies for description

Journalism & Mass Communication

M.A.

Law

M.A. LL.M.

Management

MBA & MPA

Management of Information Systems

See Management for description

Marketing

See Management for description

Materials & Manufacturing

See Engineering for description

Middle Eastern History

See Arabic Studies for description

Middle East Studies

M.A. & Graduate Diploma

Operations Management

See Management for description

Physics

M.Sc. & Graduate Diploma

Political Science

M.A. & Graduate Diploma

Professional Development

See Political Science for description

Public Administration

MPA- See Management for description

Sociology-Anthropology

M.A.

Teaching Arabic as a Foreign Language (TAFL)

M.A. & Graduate Diploma

Teaching English as a Foreign Language (TEFL)

M.A. & Graduate Diploma

Television Journalism

Graduate Diploma - See Journalism and Mass Communication for description

Language Institutes**Arabic Language Institute**

Description of Arabic Language and Intensive courses

English Language Institute

Description of the intensive English courses for graduates

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Accounting

See Management

American Studies

Graduate Diploma (*to be launched in fall 2006*)

Anthropology

See Sociology-Anthropology

Arabic Language

Courses- See Arabic Language Institute

Arabic Language and Literature

See Arabic Studies

ARABIC STUDIES

Department of Arabic Studies
School of Humanities and Social Science

Professor Emeritus: H. Sakkout

Professors: N. Hanna (Sabbatical), B. O'Kane, M. El Rabie, G. Scanlon, M. Serag

Associate Professor Emeritus: E. Sartain

Associate Professors: E. Fernandes (Chair), H. Lutfi, S. Mehrez, M. Birairi

Assistant Professors: M. Badrawi, M. Malczycki, R. McKinney

Master of Arts

The student may choose one of the following areas of specialization:

1. Arabic Language and Literature
2. Islamic Art and Architecture
3. Middle Eastern History

Courses

The student must take a minimum of eight courses in his/her area of specialization.

These must include:

- For Arabic Language and Literature specialization: either ARBS 504 or ARBS 507 or ARBS 508
- For Islamic Art and Architecture specialization: either ARBS 572 or ARBS 573
- For Middle Eastern History specialization: either ARBS 530 or ARBS 542 or ARBS 543

A maximum of two 400-level courses may be taken as part of the M.A. program.

300 and 400 level courses may be taken at the 500 level in which case extra readings and research will be required of the graduate student. See below ARBS 510-511, ARBS 512-513, ARBS 521-522, ARBS 560-561, ARBS 575-576.

Subject to departmental approval, up to two courses may be taken outside the area of specialization.

Courses on 19th - 20th century Middle Eastern history are taught by the Department of History.

Language

To be eligible for the master of arts degree in Arabic Studies the student must reach an acceptable level of proficiency in advanced literary Arabic as established by examinations. The student whose degree concentration is Arabic language and literature is expected to go beyond this minimum requirement. The student whose degree concentration is Islamic Art & Architecture is expected to attain the equivalence of ALNG 201 by test. To be eligible for the degree of master of arts in Arabic studies, the student must also demonstrate through examination a reading knowledge of at least one major language other than English, preferably French or German. If the student's research can be performed successfully without knowledge of a third language, the department may exempt the student from this requirement.

Thesis

A thesis is required in all three branches of the master of arts in Arabic studies. The thesis must be written in English and submitted in accordance with university regulations.

Graduate Diploma in Islamic Studies

This diploma is intended to provide basic knowledge of Islam and Islamic institutions and thought, particularly for students who have not specialized in Islamic studies at undergraduate level. Full-time students are expected to finish the program in two semesters. Extra time must be allowed for prerequisite courses and Arabic language courses if required.

Admission

The applicant must satisfy the university's general requirements for graduate admission. For details, refer to the "Admissions" section of the catalog. Prerequisite courses may be assigned, depending on the applicant's academic background.

Language

To qualify for the diploma, each candidate must demonstrate proficiency in classical Arabic at the intermediate level (ALNG 202 or its equivalent). It is preferable that the student reach the required level of Arabic proficiency before the beginning of the course work.

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Courses

A minimum of six courses are required for the diploma.

All students must take the following:

ARBS	435	Studies in the Qur'an
	439	Islamic Law
	451	Islamic Institutions
	527	Seminar: Selected Topics in Islamic Studies

Two or more additional courses are to be selected from the following:

ARBS	404	Sira, Tafsir and Hadith
	440	Arabic Historical Literature
ARBS/HIST	454	Modern Movements in Islam
HIST	460	Selected Topics in Middle Eastern History, 600-1800 A.D.
ARBS/HIST	463	Selected Topics in the History of Islamic Thought and Institutions

Any 400-level course in Islamic Art and Architecture provided that its prerequisite courses have been taken.

ARBS	521-522	Special Studies in Islamic Thought and Institutions
	530	Seminar on a Selected Topic in Medieval Arab/ Islamic History, 600-1800 A.D.
	580	Independent Study and Readings

Arabic Studies Courses (ARBS)

504 Seminar on a Selected Work or Author in Classical Arabic Literature (3 cr.)

Offered occasionally.

May be repeated for credit when content changes.

507-508 Seminar on Modern Arabic Literature (3 cr.)

Offered in alternate years.

Aspects of Arabic literature in the nineteenth and twentieth centuries.

510-511 Special Studies in Classical Arabic Literature (3 cr.)

Prerequisite: consent of instructor. 510 offered in fall, 511 offered in spring.

Reading and papers on selected topics; attendance at a course of undergraduate lectures may be required. May be repeated for credit when content changes.

512-513 Special Studies in Modern Arabic Literature (3 cr.)

Prerequisite: consent of instructor. 512 offered in fall, 513 offered in spring.

Reading and papers on selected topics; attendance at a course of undergraduate lectures may be required. May be repeated for credit when content changes.

514 Bibliography and Manuscript Study (3 cr.)

Offered occasionally.

Techniques of working with Arabic manuscripts and scripts, editing, bibliographical study.

521-522 Special Studies in Islamic Thought and Institutions (3 cr.)

Prerequisite: consent of instructor. 521 offered in fall, 522 offered in spring.

Special readings and papers by graduate students who are attending a course of undergraduate lectures. May be repeated for credit when content changes.

527 Seminar: Selected Topics in Islamic Studies (3 cr.)

Prerequisite: consent of instructor. Offered in spring.

Selected topics in Islamic Studies. May be repeated for credit when content changes.

530 Seminar on a Selected Topic in Medieval Arab/Islamic History, 600-1800 A.D. (3 cr.)

Prerequisite: consent of instructor. Offered occasionally

Selected topics in Medieval Arab/Islamic history, 600-1800 A.D. May be repeated for credit when content changes.

542 Seminar on the Nineteenth-Century Middle East (3 cr.)

Same as HIST 542. Offered in fall.

Readings, discussion, and research.

543 Seminar on the Twentieth-Century Middle East (3 cr.)

Same as HIST 543. Offered in fall.

Readings, discussion, and research.

560 - 561 Special Studies in Middle Eastern History (3 cr.)

Prerequisite: consent of instructor. 560 offered in fall, 561 offered in spring.

Special readings for graduate students who are also attending a course of undergraduate lectures. May be repeated for credit when content changes.

572 Fieldwork in Islamic Architecture (3 cr.)

Offered occasionally.

Archaeological methodology; examination of monuments and sites. May be repeated for credit when content changes.

573 Seminar on the Architecture of a Selected Period (3 cr.)

Offered occasionally.

May be repeated for credit when content changes.

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575-576 Special Studies in Islamic Art and Architecture (3 cr.)

Prerequisite: consent of instructor. 575 offered in fall, 576 offered in spring.

Reading and papers on selected topics by graduate students who also attend a course of undergraduate lectures. May be repeated for credit when content changes.

580 Independent Study and Readings (3 cr.)

Prerequisite: consent of unit. Offered occasionally.

Guided readings in selected topics in Islamic Art and Architecture, Middle Eastern History, Arabic Literature and Language or Islamic Studies given on an individual basis.

599 Research Guidance and Thesis (no cr.)

Offered in fall and spring.

Business Administration (MBA)

MBA - See Management

Comparative Literature

See English and Comparative Literature

Comparative Politics

See Political Science



COMPUTER SCIENCE

Department of Computer Science
School of Sciences and Engineering

Distinguished Lecturer : K. El-Ayat

Professors: A. Goneid, A. Khalil, M. N. Mikhail (Chair), A. S. Mohamed

Associate Professors: A. Abdel Bar, A. El-Kadi, M. Mahmoud

Assistant Professors : A. Zeid, S. El-Kassas

Master of Science

The master of science program in computer science offers students the opportunity to engage in course work, research projects, and other activities designed to develop theoretical background and up-to-date practical skills in the rapidly changing area of computer science. The program provides a broad spectrum of study in preparation for careers in advanced computer research areas. The program allows students flexibility in planning their program of study after the initial course requirements are met.

Admission

The program is open to computer science graduates and also to selected students whose preparation is outside computer science. However, students entering graduate study from outside the computer science area may be required to go through additional preparation before beginning their graduate program. Those students who have some deficiency in their undergraduate training but are well qualified in other aspects may be admitted provisionally. The department may prescribe a number of prerequisite courses to make up for the deficiency.

Courses (24 credit hours)

A minimum of eight courses (24 credit hours) is required: four core courses (12 credit hours), and four electives (12 credit hours).

Core Courses (12 credit hours)

All candidates must take the following four core courses:

CSCI	525	Algorithms and Complexity Theory, 3 cr.
	530	Contemporary Computer Design, 3 cr.
	545	Distributed Systems, 3 cr.
	565	Advanced Artificial Intelligence, 3 cr.

Elective Courses (12 Credit hours)

CSCI	527	Neural Networks and Genetic Algorithms, 3 cr.
	529	Design and Analysis of Parallel Algorithms, 3 cr.
	532	Parallel Computer Architecture, 3 cr.
	535	High Speed Networks, 3 cr.
	541	Advanced Software Engineering, 3 cr.
	555	Computer Graphics and Animation, 3 cr.

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CSCI	563	Digital Image Processing and Pattern Recognition, 3 cr.
	567	Robotics and Computer Vision, 3 cr.
	585	Selected Topics, 3 cr.

Thesis (8 Credit hours)

The graduate thesis work is an important and required part of the master's degree program. Each student must submit a thesis topic that has been approved by a faculty supervisor, normally after 12 credit hours. Various research topics are discussed in the seminar courses. The student must register in the first seminar course before submitting a thesis topic and once during the execution of the thesis research. To ensure adequate faculty consultation on the thesis, the student must register for the graduate thesis for at least two semesters.

The Computer Science seminar is a two-semester course (1 credit hour per semester) designed to prepare students for research in computer science. The seminar must be taken by all students. The first seminar will help the student select a topic for his/her thesis and must be taken before submitting a thesis topic. In the second seminar, the student will present a report on his/her thesis progress.

Example of a Program Completion Plan:

Semester 1:	3 graduate courses
Semester 2:	3 graduate courses + seminar P1
Semester 3:	2 graduate courses + Thesis
Semester 4:	Thesis + seminar P2

Graduate Diploma in Computer Science

Admission

Admission requirements are the same as those for the M.Sc.

Courses (18 credit hours)

Course work for the diploma in Computer Science is directed at providing the student with background in subjects relevant to the designated Computer Science discipline.

A total of six 500-level CSCI courses (18 credit hours) is required for the diploma.

The courses which have been successfully completed in the diploma program can be considered as part of the master's degree requirements for students who are admitted to the master's degree studies. The diploma may be completed in one academic year; no thesis is required.

Computer Science Courses (CSCI)

525 Algorithms and Complexity Theory (3 cr.)

Measures of the complexity of algorithms. Amortized complexity. Greedy algorithms. Dynamic programming. NP-Completeness and lower-bound theory. Cook's Theorem.

Techniques for proving problems NP-complete. Complexity of parallel algorithms. Well-parallelizable and hardly-parallelizable problems.

527 Neural Networks and Genetic Algorithms (3 cr.)

Basic concepts on artificial neural networks, non-symbolic vs symbolic information learning systems. Unsupervised learning networks, supervised learning networks, neural network hardware. Evolutionary computations, genetic algorithms, evolutionary programming, genetic programming. Hybrid systems integrating classical AI techniques with biologically-based techniques, and some applications.

529 Design and Analysis of Parallel Algorithms (3 cr.)

PRAM model and work-time presentation framework. Basic parallel algorithm design techniques: balanced problem decomposition, printer jumping, divide and conquer, partitioning, pipelining, accelerated cascading, symmetry breaking. Parallel searching and sorting. Parallel pattern matching. Randomized parallel algorithms.

530 Contemporary Computer Design (3 cr.)

Principles and design trade-offs in the key components of a modern computer. Instruction set design, data flow inside the CPU, pipeline design, cache design, memory management unit, computer arithmetic, system bus, I/O interfaces. Hardware description and modeling using VHDL.

532 Parallel Computer Architecture (3 cr.)

Prerequisite: CSCI 530.

Analysis and design of high-performance computer systems, pipelining techniques, cache design, instruction level parallelism, parallel and vector architectures, shared memory multiprocessors, message passing multicomputers, data flow architectures, scalability and performance, software for parallelism.

535 High Speed Networks (3 cr.)

Prerequisite: CSCI 435 or equivalent.

Introduction to the need for Giga-bit networks and the technology support of that demand. Changes required to support this high rate of data, voice, and live video. Overview of IDN, ISDN, and B-ISDN. Fiber Optics Medium. Cell networking. ATM (Asynchronous Transfer Mode). Switching and switches. Traffic control in ATM networks. ATM Local Area Networks.

541 Advanced Software Engineering (3 cr.)

Formal methods in software engineering, first-order logic, basic specification elements and rigorous proofs. Verification and validation. Testing and debugging techniques and tools. Reusability, modularity, top-down and bottom-up development approaches, object classification, support for concurrency and polymorphism.

545 Distributed Systems (3 cr.)

Models of concurrency, specifications of distributed systems, consistent global states, fault tolerance and related problems, interprocess communication, distributed file

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systems, replication mechanisms, distributed operating systems, real-time distributed systems, transputers, and case studies of distributed systems.

555 Computer Graphics and Animation (3 cr.)

Fundamental concepts and basic techniques of computer graphics. Algorithms and recent research in graphics and animation. A thorough survey of object modeling, realism, ray tracing, rendering, and light models. Modeling of animated objects, motion animation, and human animation.

563 Digital Image Processing and Pattern Recognition (3 cr.)

Image transforms, enhancement and filtering, image restoration, compression and segmentation, pattern representation and description, pattern classification, recognition and interpretation.

565 Advanced Artificial Intelligence (3 cr.)

Concepts of logic-based Artificial Intelligence, logic programming, automated deduction, planning, speech recognition, machine learning, case-based reasoning, integrated AI architecture, distributed AI, common sense representation, and fuzzy systems.

567 Robotics and Computer Vision (3 cr.)

Prerequisite: CSCI 565.

Introduction to robotic applications and research, spatial representation, robot kinematics, jacobian matrix, motion trajectory, sensor and data fusion, sensor placement, imaging for robotics, object identification, wireless communication. Micro-controllers, real-time operating systems and computer interfacing.

585 Selected Topics in Computer Science (3 cr.)

Prerequisite: permission of instructor.

Topics chosen according to special interests of faculty and students. May be repeated for credit more than once if content changes.

590 Seminar (1 cr.)

Seminars of research topics given by invited speakers as well as presentation and discussion of results obtained by graduate students during their research work. Must be taken twice for credit. Graded pass or fail.

599 Graduate Thesis (3 cr.)

Consultation on problems related to student thesis. Must be taken twice for credit.

Construction Engineering

See Engineering

Design

See Engineering

ECONOMICS

Department of Economics
School of Business, Economics and Communication

Professors: T. Abdel Malek, G. Amin, A. Beshai, A. El Mawaziny, W. Mikhail, H. Thompson

Associate Professors: A. Ezz El Arab, M. George, N. Rizk (Chair)

Assistant Professors: M. Abdel Baki, S. Al Azzawi, H. El-Ramly, A. Kamaly, E. Khalil, I. Ruble, M. Said, J. Salevurakis, R. Seda, T. Selim

The Department of Economics offers three graduate programs in economics: an established master's program and two new programs: an M.A. Economics in International Development and a Graduate Economics Diploma in International Development. Together, these three programs cater to evolving job market needs and keep up with recent developments in the field.

Master of Arts in Economics

Completion of the AUC Graduate Program in Economics opens wide opportunities for prestigious and creative jobs in research centers and departments, both in government and private institutions. AUC graduates of this program have also made valuable additions to several U.N. and international development institutions.

Admission

The applicant for admission to the master's program in economics should have a considerable background in economic theory. An applicant whose bachelor's degree is in a discipline other than economics may be admitted provisionally, but in such cases the applicant must either display competence in economics by passing required examinations or develop the necessary competence by completing additional undergraduate courses. The prerequisite for full admission to the master's degree in economics is completion of ECON. 418 and 425 with a grade of B or better; i.e. a student must complete ECON. 418 and 425 before enrolling in any 500 level course.

Applicants to the M.A. in Economics must obtain an acceptable score on the Graduate Record Exam (GRE) within the first semester of enrollment in the program. Students are strongly urged to apply for the GRE exam immediately upon receipt of their admission letter in order to allow enough time for the reservation of an exam slot and the receipt of results by AUC.

Courses

A minimum of 27 semester hours is required. All students must take: ECON 501 Advanced Macroeconomic Theory, ECON 502 Advanced Microeconomic Theory, ECON 518 Econometrics, and ECON. 525 Research Workshop. A maximum of six hours of 500-level courses or 400 level courses in related fields other than economics may be taken for

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graduate credit with the approval of the Director of Graduate Studies and the Department Chair.

Comprehensive Examination

The written comprehensive examination covers economic theory, selected fields in the candidate's degree program, and the methods and techniques of economic research. An oral examination may also be conducted. A comprehensive exam is only required of students not writing theses.

Thesis

A thesis is recommended. In special cases, with departmental approval, a student may be permitted to take an option involving completion of three additional courses instead of a thesis.

An M.A. thesis is not allowed to be submitted for examination until the student has made a presentation of a major part of it at the department seminar.

M.A. Economics in International Development

This program is specially designed for students who wish to acquire in-depth understanding and knowledge in the field of development. An interdisciplinary approach is adopted as an essential requirement for gaining a broader and more integrated perspective of this dynamic field of study.

The program should be of interest to those who plan to seek a position or a career with a wide range of development-related institutions at the macro or micro levels. Examples include United Nations agencies, The World Bank, bilateral donor representative offices/projects, NGOs, and development-finance institutions. In addition, the program equips students to assume technical positions in government departments directly concerned with development planning and evaluation.

Admission

The applicant for admission to this program should have a good knowledge of the concepts and analytical tools of economics. An applicant whose bachelor's degree is in a discipline other than economics may be admitted provisionally, but in such cases the applicant must either display competence in economics by passing required examinations or develop the necessary competence by completing additional undergraduate courses.

Applicants to the M.A. in Economics must obtain an acceptable score on the Graduate Record Exam (GRE) within the first semester of enrollment in the program. Students are strongly urged to apply for the GRE exam immediately upon receipt of their admission letter in order to allow enough time for the reservation of an exam slot and the receipt of results by AUC.

Courses

A minimum of 36 credit hours is required. All students must:

1. Take seven core courses, five from economics and two from allied disciplines as indicated below:

ECON	500	The Economic Setting for Development, 3 cr.
ECON	503	Economic Growth & Development, 3 cr.
ECON	505	International Economics, 3 cr.
ECON	519	Project Evaluation, 3 cr.
ECON	526	Development Research Workshop, 3 cr.
SOC/ANTH	500	Social Thought, 3 cr.
POLS	502	Scope & Method of Development Analysis, 3 cr.

2. Choose four electives, one from each of the following groups of courses as indicated below:

Group 1

ECON	504	Economic Policy, 3 cr.
ECON	506	Advanced Topics in Applied Economics, 3 cr.
ECON	508	Labour Economics, 3 cr.
ECON	511	Economic Development in Middle East Countries, 3 cr.
ECON	513	Economic Strategies for Sustainable Development, 3 cr.
ECON	514	Ethical Issues in Development, 3 cr.

Group 2

IHRL	512	Human Rights and the United Nations, 3 cr.
POLS	517	The Protection of Vulnerable Groups: Women and Children, 3 cr.
POLS	530	Comparative Political Development, 3 cr.
POLS	562	International Development Organizations, 3 cr.

Group 3

SOC/ANTH	515	Kin, Friends & Neighbours, 3 cr.
SOC/ANTH	520	Sex Roles, Gender, and Society, 3 cr.
SOC/ANTH	525	Religion, Ideology & Society, 3 cr.
SOC/ANTH	540	Agrarian and Pastoral Transformation, 3 cr.
SOC/ANTH	545	Cities: Structure and Dynamics, 3 cr.
SOC/ANTH	555	Comparative Health & Healing Systems, 3 cr.
SOC/ANTH	560	Population Dynamics, 3 cr.
SOC/ANTH	570	Environment and Society, 3 cr.

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Group 4

PADM	503	Management Communications, 3 cr.
PADM	518	Local Government and Development, 3 cr.
MGMT	504	Human Resources Strategy, 3 cr.

3. Undertake a practicum with an approved host organization.

ECON	590	Practicum, 3 cr.
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Practicum

The program does not require a comprehensive examination or a thesis. Instead, students are required to undertake a 200-hour practicum over a 4-6 week period with a development-related institution, preferably after completing six core courses. The Department will assist students in identifying appropriate hosts for the practicum and in placing them. The practicum is an essential requirement of the program, giving it a distinct feature that is expected to add a pragmatic exposure to students in a serious development work setting. The Department and host institutions will be jointly responsible for supervising and evaluating student practicum work.

A research paper is required as part of the practicum assignment. The paper will address a topic closely related to the student's practicum work and is expected to follow sound research methods, drawing on the support that will be provided in ECON. 526 Development Research Workshop.

While the Department is responsible for arranging practicum placements, some flexibility may be exercised in setting the timing of the practicum in view of the need to take due note of host institutions' work schedules and select meaningful assignments for students. In no case, however, will students be eligible for the practicum until they complete at least three core course, and undertake ECON. 526 before or concurrently with the practicum assignment.

Economics Graduate Diploma in International Development

This graduate diploma is designed for students who wish to gain a basic understanding and knowledge of development but who may not intend to proceed to obtain a Master's Degree. This Diploma program is also inter-disciplinary to provide a broader and more integrated perspective of development issues.

The Diploma should be of interest to those who plan to seek a position or a career with development-related institutions or with government departments directly concerned with development planning and evaluation.

Admission

The applicant for admission to this program should have a good knowledge of the concepts and analytical tools of economics. An applicant whose bachelor's degree is in a discipline other than economics may be admitted provisionally, but in such cases the applicant must either display competence in economics by passing required examinations or develop the necessary competence by completing additional undergraduate courses.

Applicants to the program must obtain an acceptable score on the Graduate Record Exam (GRE).

Courses

A minimum of 18 credit hours, consisting of six core courses that must include two non-economics courses, as follows:

ECON	500	The Economic Setting for Development, 3 cr.
ECON	503	Economic Growth & Development, 3 cr.
ECON	526	Development Research Workshop, 3 cr.

Either

ECON	505	International Economics, 3 cr.
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OR

ECON	519	Project Evaluation, 3 cr.
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SOC/ANTH	500	Social Thought, 3 cr.
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POLS	502	Scope & Method of Development Analysis, 3 cr.
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Students awarded the Diploma may apply for admission to the M.A. in Economics International Development.

Economics Courses (ECON)

500 The Economic Setting for Development (3 cr.)

Foundation course dealing with macroeconomic variables and issues concerned with the functioning of an economy, in addition to selected microeconomic aspects pertinent to development. Special attention is given to concepts and tools applicable to challenges facing developing countries whose economies often lack the maturity of more developed countries in terms of institutional and policy settings.

501 Advanced Macroeconomic Theory (3 cr.)

Prerequisites: ECON 425. Offered in Spring

Analysis of the equilibrium and disequilibrium macroeconomic activity of an open, monetized economy with a government sector. Theories of aggregate consumption and investment behavior.

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502 Advanced Microeconomic Theory (3 cr.)

Prerequisite: ECON 425. Offered in Fall.

The theory of household consumer behavior regarding both durable and nondurable commodities. The theories of production, the firm, and market equilibria. General equilibrium theory.

503 Economic Growth & Development (3 cr.)

Prerequisites: ECON 500* or ECON 501** and 502**.

Growth models and their limitations in developing countries, role of capital, investment, and inflation in economic development, non-economic factors, criteria, and choices of techniques in the process of development.

504 Economic Policy (3 cr.)

Prerequisites: ECON 500* or ECON 501**. Offered in Fall.

The relation between economic analysis and economic policy. Concepts used in economic policy, aims and targets, instruments and measures, qualitative and quantitative policy, elements of welfare economics.

505 International Economics (3 cr.)

Prerequisites: ECON 500* or ECON 501** and 502**.

Analysis of topics in the pure theory of international trade. International aspects of monetary mechanisms, nature and effects of foreign investment, significance of trade theory and monetary movements for developing countries.

506 Advanced Topics in Applied Economics (3 cr.)

Prerequisites: ECON 500* or ECON 501** and 502**. Offered occasionally.

Guided readings, research, and discussion in a special field in applied economics. May be taken for credit more than once if content changes.

507 Advanced Topics in Economic Theory (3 cr.)

Prerequisites: ECON 501 and 502. Offered occasionally.

Guided readings, research, and discussion. May be taken for credit more than once if content changes.

508 Labor Economics (3 cr.)

Prerequisites: ECON 500* or 308. Offered occasionally.

The course delivers an advanced treatment of modern labor economics emphasizing the integration of theoretical and empirical models. Topics to be covered include: life-cycle human capital models, search theoretic models, internal markets, reservation wages, job search and matching. Issues in the theory and measurements of economic inequality are covered.

511 Economic Development in Middle East Countries (3 cr.)

Offered occasionally.

Income, population, and consumption trends in selected countries. Analysis of their capital formation, industrial structure, international trade position, and current economic planning.

513 Economic Strategies for Sustainable Development (3 cr.)

Prerequisites: ECON 500* or ECON 501**, 502**. Offered occasionally.

Economic strategies pertaining to the issues of balanced sustainable development from both macroeconomic and microeconomic perspectives are investigated. Advanced aggregate macroeconomic models dealing with short term economic allocation, medium term economic adjustments, and long term economic growth with technical progress are studied from an economic strategy perspective. Microeconomic foundations and environmental valuation for micro-sustainable development are examined using private capital and social welfare criteria with environmental amenities. Country studies finalize the course.

514 Ethical Issues in Development (3 cr.)

Prerequisites: ECON 500* or 501**.

This course issues of an ethical nature that are related to the development process, decision-making and implementation of development projects. The course will first consider ethical and moral concepts and their philosophical underpinnings and review different schools of thought. Against this background, selected issues specific to development strategies and practices will be dealt with. The course will make use of case studies to illustrate and help analyze issues of concern.

515 Mathematical Economics (3 cr.)

Prerequisites: ECON 425. Offered occasionally.

Introduction to economic models: models of the single sector, the trade cycle, growth with employment, medium- and long-term planning, and cyclical growth. Economic regulation, the treatment of technical progress, input-output models.

518 Econometrics (3 cr.)

Prerequisites: ECON 418. Offered in fall.

Review of the traditional methodology of the general linear model. Maximum-likelihood estimation with applications in limited-dependent variable models, switching regression models, ARCH models, etc. Time-series modeling. Dynamic modeling: the general to specific methodology. Non-stationarity and cointegration. Vector autoregression. Exogeneity and structural invariance. Rational expectations. State-space models and the Kalman filter.

519 Project Evaluation (3 cr.)

Prerequisites: ECON 500* or ECON 502**.

Analysis of economic criteria (cost benefit analysis) applied in evaluating development projects for economic policy and planning, following a review of the project cycle from inception to impact evaluation.

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525 Research Workshop (3 cr.)

Prerequisites: ECON 501, 502 and 518. Offered occasionally.

Research methodology: collection of data, analysis of information, measurement, and testing hypotheses. Completion of a major research term paper.

526 Development Research Workshop (3 cr.)

Prerequisites: completion of at least three core courses.

Review of research process, dealing with problem/hypothesis definition, data collection/analysis, statistical measurement and testing methods particularly relevant to applied development issues (quantitative and qualitative data) and some exposure to applied econometrics. This is followed by individualized guidance of students' research proposals and projects. Completion of a research-based paper.

588 Comprehensives (no cr.)

Offered in fall and spring.

Individual consultation for students preparing for the comprehensive examination.

590 Practicum (3 cr.)

Prerequisites: completion of 3 core courses at least.

A 200-hour assignment with a relevant development-related institution, to be completed over a 4-6 week period, providing exposure and work experience in a development setting. Students are required to prepare a research-based paper drawing on their practicum experience.

599 Research Guidance and Thesis (no cr.)

* denotes a prerequisite that applies to students enrolled in the MA Econ., or Graduate Diploma, in International Development.

** denotes prerequisites that apply to MA Econ. Degree students.

ENGINEERING

School of Sciences and Engineering

Professors: A. Abdel Hamid, A. Elimam, E. Fahmy (IEP Director), M. Farag (Vice Provost), S. El-Haggar, M. Haroun, E. Imam, S. Khedr (CENG Chair), M. Mansour, M. Serag El-Din (MENG Chair), E. Smith, M. Younan

Associate Professors: S. Abdel-Azeem, M. Abou-Zeid, H. Amer (EENG Chair), A. Ezzeldin, L. Gaafar, A. Hassanein, K. Hekman, A. Nassef, H. Salem, A. Shalaby, A. Sherif

Assistant Professors: A. Elezabi, A. Essawi, H. Hegazi

Distinguished Lecturer: H. Elabd

Master of Science

The master of science program in Engineering is administered by the Interdisciplinary Engineering Programs (IEP). It provides a broad program for study in preparation for careers in advanced engineering areas. The graduate program covers several disciplines in engineering such as Construction Engineering, Design, Environmental Engineering, Industrial Engineering and Materials and Manufacturing.

Admission

A candidate for the master's program in engineering must have a degree in engineering. Students who have some deficiency in their undergraduate training but are well-qualified in other respects may be admitted provisionally. The IEP may prescribe a program of noncredit work to make up for the deficiency.

Courses (24 credit hours)

A minimum of eight courses (24 credit hours) is required. The courses are selected from the following categories:

I- Core Courses (6 credit hours)

All students select two out of the following four courses:

ENGR 511: Computational Methods in Engineering, 3 cr.

ENGR 512: Experimental Methods in Engineering, 3 cr.

ENGR 516: Engineering for a Sustainable Environment, 3 cr.

ENGR 518: Engineering Statistics, 3 cr.

II- Concentration Courses (12 credit hours)

Students should select a minimum of four courses in one of the following specializations:

Construction Engineering

Construction Management and Systems

ENGR 570 Advanced Construction Management, 3 cr.

571 Advanced Systems for Construction Engineering, 3 cr.

572 Claims and Disputes in Construction Industry, 3 cr.

574 Methods and Equipment in Construction, 3 cr.

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- ENGR 575 Techniques of Planning, Scheduling and Control, 3 cr.
- 576 Advanced Systems for Construction, 3 cr.

Structural Engineering and Construction Materials

- ENGR 573 Advanced Construction and Building Materials, 3 cr.
- 577 The Finite Element Method in Structural Engineering, 3 cr.
- 579 Protection and Repair of Structures, 3 cr.

Design

- ENGR 517 Engineering Systems Design and Analysis, 3 cr.
- 522 Materials in Design and Manufacturing, 3 cr.
- 529 Failure Analysis and Prevention, 3 cr.
- 554 Advanced Stress Analysis in Design and Manufacturing, 3 cr.
- 555 Analysis and Design of Dynamic Systems, 3 cr.
- 557 Engineering Design Methodologies, 3 cr.
- 558 Applied Finite Elements Analysis for Engineers, 3 cr.

Environmental Engineering

- ENGR 561 Water Quality Control, 3 cr.
- 562 Unit Operations in Environmental Engineering, 3 cr.
- 564 Air Pollution Control Engineering, 3 cr.
- 567 Environmental Chemistry, 3 cr.
- 569 Groundwater Hydrology and Contamination, 3 cr.

Industrial Engineering

- ENGR 517 Engineering Systems Design and Analysis, 3 cr.
- 522 Materials in Design and Manufacturing, 3 cr.
- 526 Computer Methods in Materials Engineering, 3 cr.
- 529 Failure Analysis and Prevention, 3 cr.
- 541 Integrated Manufacturing Systems, 3 cr.
- 542 Total Quality Management, 3 cr.
- 543 Systems Modeling and Optimization, 3 cr.
- 545 Production System Design, 3 cr.
- 548 Facilities Planning and Design, 3 cr.

Materials and Manufacturing Engineering

- ENGR 517 Engineering Systems Design and Analysis, 3 cr.
- 521 Advanced Topics in Mechanical Behavior of Engineering Materials, 3 cr.
- 522 Materials in Design and Manufacturing, 3 cr.
- 523 Physical Metallurgy, 3 cr.
- 527 Composite Materials, 3 cr.
- 528 Advanced Testing and Evaluation of Materials, 3 cr.
- 529 Failure Analysis and Prevention, 3 cr.
- 541 Integrated Manufacturing Systems, 3 cr.

III- Elective Courses (6 credit hours)

A minimum of two courses are selected as electives. The courses are selected from a set of graduate courses in engineering, physical sciences, social sciences, management and other related graduate level courses subject to adviser and IEP approval. No more than one 400-level course in engineering, computer science and other related areas, not in the student's undergraduate major, may be taken for graduate credit subject to adviser and IEP approval.

Students may also select from the following list of courses:

ENGR	524	Electronic Phenomena in Solids, 3 cr.
	525	Deformation and Fracture of Materials, 3 cr.
	526	Computer Methods in Materials Engineering, 3 cr.
	553	Advanced Computer Aided Design, 3 cr.
	554	Advanced Stress Analysis in Design and Manufacturing, 3 cr.
	565	Air Pollution and Combustion, 3 cr.
	568	Noise Pollution Fundamentals, Measurements and Control, 3 cr.

Construction Engineering students must select a minimum of one course from the Concentration Courses in Construction Engineering and:

ENGR	592	Advanced Topics in Engineering, 3 cr., may include:
		- Geotechnical Engineering
		- Construction Technology: Analysis and Developments
		- Advanced Structural Design and Construction

Thesis

Graduate thesis work is an important and required part of the master's degree program. Each student must submit a thesis topic that has been approved by a faculty adviser by the end of the first academic year. Various research topics are discussed in ENGR 590 and 591, Graduate Thesis Seminar I and II. Students must register in ENGR 590 before submitting a thesis topic and in ENGR 591 during execution of the thesis research to present their thesis plan. To ensure adequate faculty consultation on the thesis, the student must register for ENGR 599, Graduate Thesis, by the completion of 18 credit hours. Students must register in ENGR 599 continuously and for at least two semesters. The first two registrations in ENGR 599 must be for three credit hours, after that ENGR 599 is taken for one credit hour each semester until completion of the program requirements.

Graduate Diploma in Engineering

Admission

Admission requirements are the same as those for the M.Sc. Program.

Courses (18 credit hours)

Course work for the diploma in engineering is directed at providing the student with background in subjects relevant to the designated engineering discipline. A total of six courses (18 credit hours) is required for the diploma.

The courses may be selected from the 500-level engineering courses offered. A minimum of three courses (9 credit hours) must be taken in a designated area. No more

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than one 400-level course, not previously taken, may be considered for credit.

The courses which have been successfully completed in the diploma program can be considered as part of the master's degree requirements for students who are admitted to the master's degree studies. The diploma program may be completed in one academic year; no thesis is required.

Engineering Courses (ENGR)

511 Computational Methods in Engineering (3 cr.)

Numerical solution of sets of algebraic and transcendental equations, eigen system analysis, numerical integration and differentiation. Numerical solution of ordinary differential equations, numerical solution of partial differential equations, optimization methods. Applications using MATLAB.

512 Experimental Methods in Engineering (3 cr.)

Types of experiments. Physical models: type, scale, material selection. Experimental setups. Measurements: electrical measurements and sensing devices; pressure and flow measurements; temperature and thermal measurements; force, strain and motion measurements; computer data storage. Design of experiments: review of statistical inference, single factor experiments, randomized block and Latin square designs, factorial designs. Regression.

516 Engineering for a Sustainable Environment (3 cr.)

Solid, industrial and hazardous waste generation and control, with an emphasis on sustainable engineering practices such as environmental impact assessment and performance, waste management, pollution prevention, waste minimization, cleaner production, energy recovery, recycling and reuse.

517 Engineering Systems Analysis and Design (3 cr.)

Introduction, system design process, system modelling and optimization, design for operational feasibility, artificial intelligence and expert systems, applications.

518 Engineering Statistics (3 cr.)

Probability distributions, sampling distributions, estimation, test of hypotheses, regression, correlation, and nonparametric statistics.

521 Advanced Topics in Mechanical Behavior of Engineering Materials (3 cr.)

Parameters affecting the mechanical behavior of materials. Strengthening mechanisms in metals. High-temperature and room temperature deformation. Effect of residual stresses. Mechanisms of cyclic deformation. Structural properties of polymers, composites and nanostructured materials. Case studies using conventional and advanced materials. Design of new materials: Meso, Micro and Nanostructured materials, their synthesis and applications.

522 Materials in Design Manufacturing (3 cr.)

Interrelationship of design, materials and manufacturing. Control of material

properties to meet design and manufacturing requirements. Thermo-mechanical processing, surface treatment and coatings. Composite materials. Reverse engineering and materials substitution. Materials recycling. Economic considerations and life cycle costing. Case studies.

523 Physical Metallurgy (3 cr.)

Relationships between mechanical behavior, composition, microstructure, and processing variables. Imperfections in materials and their effect on properties. Diffusion in solids and its industrial applications. Effect of heat treatment on the microstructure and mechanical behavior for ferrous and non-ferrous alloys. Design of new materials: meso, micro and nanostructured materials, their synthesis and applications.

524 Electronic Phenomena in Solids (3 cr.)

Quantization and energy barrier, central field problem; free electron models of solids; specific heat, susceptibility, emission; electron transport in electrical and magnetic fields; optical phenomena: transmittance, reflectance, dielectric constant, band models of solids, determination of fermi surface semiconductors; mobility; impurity states, carrier lifetime; fundamental theory and characteristics of elemental and compound semiconductors. Semiconductor nanotechnology.

525 Deformation and Fracture of Materials (3 cr.)

Fundamental concepts describing the mechanics and mechanisms of plastic deformation under different conditions of temperature, time, and strain rates. The mechanical and metallurgical aspects of crack nucleation and propagation under different loading conditions and in different environments. Materials design for safe structures.

526 Computer Methods in Materials Engineering (3 cr.)

Applications of computer and modeling techniques to the study of materials systems and processes. Examples of the topics discussed are: Behavior of multi phase materials and casting and working process.

527 Composite Materials (3 cr.)

Principles of composite materials, continuous and discontinuous fiber reinforcement, processing and testing of composite materials, applications of composite materials in engineering, case studies.

528 Advanced Testing and Evaluation of Materials (3 cr.)

Experimental techniques in the study of materials including quantitative measurements for the characterization of micro and nanostructure materials using optical, X-ray diffraction as well as electronic, and atomic force microscopy. Physical examination and nondestructive testing of materials. Industrial applications of different techniques.

529 Failure Analysis and Prevention (3 cr.)

Failure analysis methodology and techniques including fractography, metallography, and mechanical testing. Causes of failure in service including manufacturing defects, design deficiencies, environmental effects, overloads. Fail safe designs. Case studies in failure analysis.

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541 Integrated Manufacturing Systems (3 cr.)

Computer aided manufacturing, automation, flexible manufacturing systems, numerical control machines, computerized process planning, information systems in a plant, selection of automated systems.

542 Total Quality Management (3 cr.)

Product quality and losses to society, loss function, product life cycle, design for quality, quality deployment charts, customer needs, process design planning and control, continuous quality improvement, quality circles.

543 Systems Modeling and Optimization (3 cr.)

Modeling of large scale industrial problems, theory of optimization, software performance evaluation, simulation of complex industrial systems, input/output analysis, model validation, overview of simulation languages, manufacturing systems case studies.

545 Production Systems Design (3 cr.)

Production planning, workforce and line balancing capacity planning and expansions, optimal sequencing and scheduling, measures of effectiveness of operating systems, computer applications, applied case studies.

548 Facilities Planning and Design (3 cr.)

Location evaluation for plants, warehouses, and facilities, computerized layout design, selection and installation of material handling equipment, planning for expansion, modeling and analysis of facility layout: Quadratic assignment approach, graph theoretic approach, decomposition of large facilities, locating new facilities.

553 Advanced Computer Aided Design (3 cr.)

System architecture; components and interfaces; the data base aspects of CAD; man-machine communication; computer graphics for geometrical design, drafting and the data representation; the interrelationship between CAD and numerical methods, simulation and optimization.

554 Advanced Stress Analysis in Design and Manufacturing (3 cr.)

Differential and integral formulations of elastic problems: equilibrium, continuity, generalized material relations, boundary conditions. Applications to two dimensional problems, plates and shells. Yield criteria and inelastic stress-strain relations. Limit analysis. Inelastic design. Simplified techniques for large deformation problems: energy approach, slab method, and upper bound solutions, numerical techniques.

555 Analysis and Design of Dynamic Systems (3 cr.)

Introduction to systems concepts. Modeling of lumped elements and systems. Solution methods for transient and steady state behavior. Design and synthesis of mechanical networks. Automatic controls. Compensation and design of control systems. Digital control systems.

557 Engineering Design Methodologies (3 cr.)

Conceptual design: levels, generic concepts, main and subconcepts. The preliminary design stage. Design for reliability. Design optimization. Examples and a case study.

558 Applied Finite Element Analysis for Engineers (3 cr.)

Advanced modeling techniques. Material, geometric and boundary condition nonlinearities. Application to elastoplasticity, creep and buckling. Time response dynamic analysis, nonlinear heat transfer. Projects involving extensive utilization of FEM packages on engineering workstations.

561 Water Quality Control (3 cr.)

Water quality parameters: standards and analysis; theory and basic processes for modeling fate and transport of pollutants in surface water bodies; integrated water pollution control strategies.

562 Unit Operations in Environmental Engineering (3 cr.)

Theory and design of unit operations and processes in environmental engineering, emphasizing water and wastewater treatment; namely: physical, chemical and biological unit processes, sludge handling processes.

564 Air Pollution Control Engineering (3 cr.)

Air pollutants sources, sinks, and residence time. Costs of air pollution. Control strategies and systems design. Mathematical models of air pollution. Monitoring and control instruments.

565 Air Pollution and Combustion (3 cr.)

Air pollution and combustion, combustion generated pollutants, greenhouse effect, fuel alternatives, effects of air pollution on health and vegetation, other forms of energy sources, technologies for emission reduction and control.

567 Environmental Chemistry (3 cr.)

Chemical principles for quantitative solution of environmental engineering problems with a focus on aqueous systems. Concept of chemical equilibrium is developed to determine mass distribution of environmentally significant substances. Applications of acid-base, coordination, oxidation-reduction, and organic distribution reactions are developed for water and wastewater systems.

568 Noise Pollution Fundamentals, Measurements and Control (3 cr.)

Properties of sound waves in free fields and enclosures; effects of noise on people; quantitative measurement of noise characteristics and impact; noise reduction indoors and outdoors; noise control regulations.

569 Groundwater Hydrology and Contamination (3 cr.)

Groundwater and well hydraulics with applications to water supply and control of contaminants; groundwater contamination; development, solution and application of contaminant transport equations; groundwater remediation; introduction to unsaturated flow.

570 Advanced Construction Management (3 cr.)

Prerequisite: consent of instructor.

The course covers advanced topics in the area of construction management including advanced scheduling techniques, cost schedule integration, bidding models applied

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to the construction industry emphasizing the difference in view points between owners and contractors, risk in construction, contingency and mark-up allocations, risk versus return relationship including models to determine the cost-of-capital for construction firms and projects.

571 Advanced Systems Analysis for Construction Engineering (3 cr.)

Not open for students with ENGR 517.

Introduction to the basic construction industry and its problems. Systems analysis approach; systems modelling; systems approach to engineering and management; closed versus open systems; modelling construction organizations as open systems. Decision analysis; decision making under certainty, risk and uncertainty. Utility Function and Sensitivity Analysis: definition and techniques. Introduction to Reliability; Reliability and Risk Analysis: Qualitative and Quantitative Techniques; Reliability Analysis: Knowledge Representation; Importance of Developing a Reliable Knowledge-Based System [KBS]. Restructuring the Construction Engineering Management Systems using The Systems, Reliability and Decision-Making Module.

572 Claims and Disputes in the Construction Industry (3 cr.)

The course provides an in-depth coverage of the litigious environment within the construction industry and outlines the appropriate techniques to handle such environment. Claims and disputes from both owners and contractors perspectives are covered. The course also outlines the use of techniques such as scheduling as mechanisms for the efficient resolution of claims.

573 Advanced Construction and Building Materials (3 cr.)

Recent developments in the areas of concrete, highway materials and metals. Examples are concrete admixtures, light weight aggregates, polymers, prestressed concrete, soil stabilizers, bituminous materials and high strength low alloy steels. Advanced mechanics of components incorporating innovative materials. Environmental-friendly use of materials and recycling of solid waste.

574 Methods and Equipment for Construction (3 cr.)

Same as CENG 424 with special course assignments for graduate students.

Civil construction; methods, materials, tools and equipment; traditional and modern construction technologies. Evaluation and selection of appropriate construction technology. Value engineering. Sizing, operation and maintenance of construction equipment. (Not open for AUC graduates.)

575 Techniques of Planning, Scheduling and Control (3 cr.)

Same as CENG 446 with special course assignments for graduate students.

Project definition and work breakdown structure, scheduling and control models and techniques. Resource allocation and leveling, optimal schedules, documentation and reporting services, time and cost control, progress monitoring and evaluation. Computer applications. (Not open for AUC graduates.)

576 Advanced Systems for Construction (3 cr.)

Prerequisite: consent of instructor.

Construction details, materials, equipment, manufacture, fabrication and erection

of special building structures: high rise buildings, wide span structures, underground buildings, large scale projects, specialized buildings, etc. Construction organization, formwork systems, construction technique specialized equipment, deep excavation, dewatering.

577 The Finite Element Method in Structural Engineering (3 cr.)

Prerequisite: consent of instructor.

Fundamentals of the Finite Element Method (Equilibrium Equations, Virtual Work and Potential Energy, Interpolation and Shape Functions, Convergence, and Computer Programming), One-Dimensional Elements (Truss, Beam, and Frame Elements), Two-Dimensional Elements (Plane Stress and Plane Strain Elements, and Isoparametric Formulations), Three-Dimensional Elements (General and Axisymmetric Solids), Surface Elements (Flexure in Plates, General and Axisymmetric Shells), Analyses (Vibration Analysis, Stability Analysis, and Nonlinear Analysis), and Finite Element Surface Packages.

579 Protection and Repair of Structures (3 cr.)

Types, mechanisms and analyses of deterioration of concrete and steel structures, approaches and means of damage assessment, development of sound strategy for repair and restoration. Protection and repair materials, techniques, design and economic aspects.

580 Independent Study in Engineering (3 cr.)

Independent study in various problem areas of engineering may be assigned to individual students or to groups. Readings assigned and frequent consultations held. (Students may sign for up to 3 credits towards fulfilling M. Sc. requirements).

590 Graduate Thesis Seminar I (2 cr.)

Seminars on research topics, research methodology and thesis writing, and presentations given by invited speakers.

591 Graduate Thesis Seminar II (1 cr.)

Prerequisite: ENGR 590.

Seminars on research topics given by invited speakers and on research plans given by students to discuss their thesis topics and the results they obtained in their work.

592 Advanced Topics in Engineering (3 cr.)

Prerequisite: consent of instructor.

Topics to be chosen every year according to specific interests. May be taken for credit more than once if content changes.

599 Research Guidance Thesis (3 cr.)

Consultation on problems related to student thesis. Must be taken twice for credit.

English Language Intensive Courses

See English Language Institute

ENGLISH & COMPARATIVE LITERATURE

Department of English and Comparative Literature
School of Humanities and Social Sciences

Professors: F. Ghazoul, D. Shoukri (Emerita)

Associate Professor: W. Melaney (Chair)

Assistant Professors: D. Sweet, G. Balsamo, S. Gearhart, S. Germic

Master of Arts

Admission

An applicant for admission to the master's program in English and comparative literature should have a considerable background in the study of literature. Applicants who are not native speakers of English or graduates of English and comparative literature at AUC will be required to demonstrate on the ELPET (AUC English Language Proficiency Entrance Test) or TOEFL with TWE that their command of English is adequate for study in the program.

Courses

A minimum of twenty-four graduate hours is required. Eight courses must be taken at the 500 level. All students admitted to the graduate program will be required during their first year to take ECLT 506 "Greek Classics in Translation", ECLT 508 "The History of Literary Criticism", and ECLT 509 "Modern Literary Criticism", unless they have taken these courses at the undergraduate level. No more than two graduate-level courses may be transferred from another university.

With permission of the student's adviser and the chair of the department, a student may take graduate coursework in another department provided that its content is directly concerned with the area of the student's degree work. No more than two such courses will be accepted for credit toward the master's degree.

Comprehensive Examination

All candidates for the master's degree will be required to sit for a qualifying examination after completing six courses in the department. The exam will be both written and oral. The exam will cover a list of 30 books, to be submitted by the student one month in advance, and will be prepared in consultation with the adviser. The list must be approved by the student's adviser and the department chair. Selection will be made from the major periods of Western literature and should include selections from poetry, drama, and prose. If the exam is failed, it may be repeated once. The student will not be permitted to write a thesis until the exam is passed.

Language

Before writing a thesis the student must demonstrate, in an examination, knowledge of either French or German. At the discretion of the department another European language may be substituted, should it be more pertinent to the student's field of interest. The exam for both languages will take place in Spring and Fall of each year.

Thesis

The department conceives of the thesis as a research paper of approximately 7,500 words, which should demonstrate by its high quality the student's ability to handle the techniques of research and to write critically and pointedly about a given subject. The topic must be chosen from subjects in the student's area of concentration. It must be acceptable to the student's thesis director in the light of his/her special qualification and his/her judgment of the student's capability, and the availability of the required library facilities.

A proposal must be submitted to, and approved by, the first and second readers as well as the department chair. This should be approximately five hundred words. A working bibliography should be included. There will be a final defense of the thesis and related topics.

English & Comparative Literature Courses (ECLT)

506 Greek Classics in Translation (3 cr.)

Offered in fall.

Major works of Greek literature since 700 B.C., chosen on the basis of merit and influence and studied in the most artistic translations.

507 Classics of the Ancient World (3 cr.)

Offered in spring.

Major works in ancient Near Eastern and Latin literatures studied in the most artistic translations.

508 History of Literary Criticism (3 cr.)

Offered in fall.

Study of central documents in the history of literary criticism, from Plato to the Romantics.

509 Modern Literary Criticism (3 cr.)

Offered in spring.

Analysis of the major trends in modern literary theory, such as Russian formalism, new criticism and post-structuralism.

510 Renaissance Writers (3 cr.)

Offered in alternate years.

Detailed study of the works of selected British or European writers from Petrarch to Shakespeare.

512 Seventeenth-Century Writers (3 cr.)

Offered in alternate years.

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Detailed study of the works of selected seventeenth-century European and British writers.

514 Eighteenth-Century Writers (3 cr.)

Offered in alternate years.

Selected works of major eighteenth-century writers.

516 The Romantic Movement (3 cr.)

Offered in alternate years.

Selected critical problems in the Romantic movement..

517 Nineteenth-Century Writers (3 cr.)

Offered in alternate years.

Works of selected major nineteenth-century novelists and poets.

523 Modern Poets (3 cr.)

Offered occasionally.

Readings and analyses of works of major British, European, and American poets from the beginnings of the Symbolist and Imagist movements to the present.

531 The Modern Novel (3 cr.)

Offered occasionally.

Works of selected novelists of the twentieth century.

540 Readings in American Literature (3 cr.)

Offered occasionally.

Guided reading. May be repeated for credit if content changes.

542 Readings in French Literature (3 cr.)

Offered occasionally.

Guided reading. May be repeated for credit if content changes.

543 Readings in British Literature (3 cr.)

Offered occasionally.

Guided reading. May be repeated for credit if content changes.

545-546 Selected Topics (3 cr.)

Prerequisite: consent of instructor. 545 offered in fall, 546 in spring.

Guided reading, research, and discussion. May be repeated for credit if content changes. In recent years, the following courses have been offered under this heading: *The Arabian Nights*, The Lyrical Mode (in English, Arabic and French), Autobiographies, Literature and Cultural History, Literature and the Visual Arts, Literature and Urban Culture, Theory of Narrative, The European Novel, Figures of the Scared, T. S. Eliot, The Bloomsbury Group and Albert Camus.

588 Comprehensives (no cr.)

Individual consultation for students preparing for the comprehensive examination.

599 Research Guidance and Thesis (no cr.)

Environmental Engineering

See Engineering

EUROPEAN STUDIES **(Graduate Diploma)**

School of Humanities and Social Sciences

Coordinator: J. Edwards

Faculty: E. Hill, I. Ivekovic, W. Melaney

This diploma is administered by the Department of History. It offers a broad program of interdisciplinary studies with an emphasis on the current European institutions and policies of Europe. The program of seminars and taught courses is designed as an informative background for those entering professional fields where a working knowledge of Europe will be an advantage. The program takes two semesters to complete.

Admission

An applicant is expected to have completed an undergraduate degree with a GPA of 3.00 or equivalent. The language of instruction is English in which students must be thoroughly competent.

European Studies Courses

Students take a total of six courses. Three courses of three credit hours each are required, of which one is an external seminar. Two of the three required courses are conducted with the participation of representatives of the European Union. Students will in addition select three electives from the courses available for this program.

Required courses:

- | | | |
|-----------|-----|--|
| EUST/HIST | 506 | Seminar on Practical Diplomacy (Arranged with European embassies and institutions), 3 cr. |
| EUST/HIST | 508 | Seminar on the European Union: derivation, current trends and policies. (By arrangement with invited speakers from contributing embassies and institutes), 3 cr. |
| EUST/LAW | 504 | European Union Law, 3 cr. |
| <i>or</i> | | |
| EUST/IHRL | 513 | The European and Inter-American Systems of Human Rights Protection, 3 cr. |

Electives:

- EUST 510/HIST 504 The History of the European Union, 3 cr.

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HIST	511	Special Topics in Nineteenth & Twentieth Century European Studies, 3 cr. May be taken when content relevant to the Diploma.
POLS	509	The Political Economy of Europe, 3 cr.
	544	Politics and Government of Europe, 3 cr.
	571	Special Topics in International Relations, 3 cr. (May be taken when topic concerns Europe).
EUST/LAW	504	European Union Law, 3 cr.
or		
EUST/IHRL	513	The European and Inter-American Systems of Human Rights Protection, 3 cr.
ECLT	517	Nineteenth Century Writers, 3 cr.
	542	Readings in French Literature, 3 cr.
	543	Readings in British Literature, 3 cr.

European Studies Courses (EUST)

504 European Union Law (3 cr.)

Same as LAW 504.

Introduction to the major institutions and decision making procedures of the European Union's constitutional structure as well as the foundational doctrines and processes developed by the EU judicial system.

506 Seminar on Practical Diplomacy (3 cr.)

Same as HIST 506.

Seminar visits by arrangement with European embassies and institutes; may include local and international diplomatic processes, information technology, archival methodology, etc.

508 Seminar on the European Union (3 cr.)

Same as HIST 508.

This seminar course is taught annually in cooperation with local European embassies. Seminars are conducted by faculty in conjunction with guest speakers invited by the host embassy. Topics addressed will include individual or multilateral constitutional, political, economic, social, cultural, and defense aspects of the European Union, as well as future aspirations, and Euro-Egyptian relations in the context of the Barcelona process. Graduates are expected to read selected texts in advance in order to participate actively in discussion. A 2,000 word critical analysis of an appropriate topic must be submitted.

510 The History of the European Union (3 cr.)

Same as HIST 504. Prerequisite: none, some prior knowledge of European history is desirable.

The course examines the main diplomatic, political, economic, and security issues encountered in the history of the process of integration leading to the present European Union.

511 Special Topics in Nineteenth and Twentieth Century European Studies (3 cr.)

Same as HIST 511.

Content differs according to topics.

513 The European and Inter-American Systems of Human Rights Protection (3 cr.)

Same as IHRL 513.

Examination of the procedures and substantive law contained in conventions, treaties, reports, judgments, and other documents will be examined for a comprehensive understanding of the development of human rights law in Europe and in North and South America. These human rights systems are considered in relation to their origins in social and political movements and their subsequent effects on politics and society.

Finance

See Management



FORCED MIGRATION & REFUGEE STUDIES

(Graduate Diploma)

School of Humanities and Social Sciences

Today, there are at least fifty million people forcibly uprooted by war, persecution, civil disorder, and development displacement. The vast majority of these people live in the poorest countries and at least one third of these displaced persons are found in the Middle East and Africa. Egypt stands at the crossroads of both regions. The one-year, multi-disciplinary graduate diploma is designed to meet the needs of persons who currently work in the field of forced migration, are planning to enter it, or whose research interests are issues of forced migration in Africa, the Middle East or the Mediterranean region. In a world of growing economic inequality, aggression and turmoil, the demand for trained professionals and independent researchers will not diminish.

Curriculum

The 'humanitarian regime' in its macro setting involves many actors: donors, host and receiving governments, foreign and local humanitarian organizations, and the affected populations, both refugees and their hosts. Policy-makers, humanitarians and researchers need to understand "the politics of the causes" as well as "the politics of policies" of both the host and donor states. Those working in this field also must have a thorough knowledge of international human rights standards and refugee law.

Additionally, they must appreciate the unique psychological dimensions of experiences of persecution, torture, loss, flight and adaptation. To meet these educational challenges, specialized courses in sociology, anthropology, human rights/refugee law, political science and psychology are offered. To ensure a broad comparative understanding of forced migration, students must demonstrate that they have examined issues in the Middle East and Africa. Students are also strongly encouraged to pursue internship.

The FMRS Diploma program may be completed in one year and can accommodate part-time students. Students can concurrently study for and acquire an MA in Political Science with specialization in International Human Rights Law, Middle East Studies, Professional Development, and an MA in Anthropology, provided they are registered and duly accepted there as well. See "Graduate Academic Requirements & Regulations"

Governance of the Diploma

A Joint Steering Committee (JSC) governs the graduate diploma. The JSC makes decisions concerning the diploma program including, but not limited to, admission of students, curriculum planning, approval of research proposals and elective courses.

FORCED MIGRATION & REFUGEE STUDIES / GRADUATE 411

Admission

Applicants seeking admission to the Graduate Diploma in Forced Migration and Refugee Studies must meet the requirements for graduate admission to AUC and must meet the University's language requirements. Information concerning these can be found under "Graduate Admissions" in the AUC catalog. Special consideration may be given for professional experience.

Requirements

The diploma comprises six courses - four required courses of three credit hours each (twelve credit hours) plus two elective courses (six hours) for a total of eighteen credit hours.

The courses required of all diploma students are: POLS/SOC/ANTH 507 (Introduction to Forced Migration and Refugee Studies) and PSYC 412 - 512 (Psychosocial Issues in Forced Migration), POLS/SOC/ANTH 576 (Issues in Forced Migration) and POLS 518 (International Refugee Law).

Electives

Diploma students also take two electives chosen from a list of approved courses, and are expected to complete a major research project within each elective that focuses upon forced migration and refugee studies. Every year, the FMRS cross-departmental Joint Steering Committee will review the list of electives, adding and dropping courses as appropriate to ensure sufficient forced migration and refugee studies content. The current list of approved Diploma elective courses is available from the Department of Political Science, the Department of SAPE, and from FMRS.

Learning by Doing

In addition to the taught diploma, FMRS offers opportunities for hands-on learning through involvement in research and community service activities. For more information see: www.aucegypt.edu/fmrs.

HISTORY

(Graduate Courses in History)

School of Humanities and Social Sciences

History Courses (HIST)

504 History of The European Union (3 cr.)

Same as EUST 510. Prerequisite: none, some prior knowledge of European history is desirable.

The course examines the main diplomatic, political, economic, and security issues encountered in the history of the process of integration leading to the present European Union.

506 Seminar on Practical Diplomacy (3 cr.)

Same as EUST 506.

Seminar-lecture visits by arrangement with European embassies and institutes; may include local and international diplomatic processes, information technology, archival methodology, etc.

508 Seminar on The European Union (3 cr.)

Same as EUST 508.

This seminar course is taught annually in cooperation with local European embassies. Seminars are conducted by faculty in conjunction with guest speakers invited by the host embassy in conjunction with faculty. Topics addressed will include individual or multilateral constitutional, political, economic, social, cultural, and defense aspects of the European Union, as well as future aspirations, and Euro-Egyptian relations in the context of the Barcelona process. Graduates are expected to read selected texts in advance order to participate actively in discussion. A 2,000 word critical analysis of an appropriate topics must be submitted.

510 The Idea of Europe, 1815-1945 (3 cr.)

May be offered as substitute for HIST 504.

This course examines the historical events, movements and ideas that provided the background and prelude of the post World War Two foundation of the European Union.

511 Special Topics in Nineteenth and Twentieth Century European Studies (3 cr.)

Same as EUST 511.

Content differs according to topics.

542 Seminar on the Nineteenth-Century Middle East (3 cr.)

Same as ARBS 542. Offered in fall.

Readings, discussion, and research.

543 Seminar on the Twentieth-Century Middle East (3 cr.)

Same as ARBS 543. Offered in fall.

Readings, discussion, and research.

Industrial Engineering

See Engineering

International & Comparative Law

LL.M. - See Law

International Human Rights Law

M. A. - See Law

International Relations

See Political Science

Islamic Art and Architecture

See Arabic Studies

Islamic Studies

Graduate Diploma- See Arabic Studies



JOURNALISM & MASS COMMUNICATION

Department of Journalism and Mass Communication
School of Business, Economics and Communication

Professor: H. Amin (Chair)

Senior Lecturer: S. Friedlander

Associate Professor: K. Keenan

Assistant Professors: R. Abdullah, R. Berenger

Lecturers: H. Fikry, N. Hamdy, J. Key, R. Jones, I. Saleh, L. Pintak

Master of Arts

The master of arts program in journalism and mass communication is designed to provide intellectual growth and advanced training for persons already engaged in mass media or public information work. Students wishing to specialize in a particular area, such as marketing communications or international business journalism, sociological or political communication, are encouraged to design a sequence of elective courses that best meets their interests.

Admission

In addition to the general requirements established by the university, the applicant must demonstrate a proficiency in English at an advanced level. Applicants are admitted in the fall semester.

Students who have neither an undergraduate degree in journalism nor at least two years of significant mass media or research experience might be asked to overcome deficiencies through prescribed readings and/or a program of undergraduate courses completed with grades of B or higher.

Students entering this program may be required to take a diagnostic test to determine whether they need to take undergraduate prerequisites in order to eliminate academic deficiencies.

Courses

A minimum of 27 graduate credit hours is required, including the following four core courses: JRMCM 500 Mass Communication Theory and Literature, JRMCM 502 Current Issues in Mass Communication, JRMCM 504 Research Methods in Mass Communication, and JRMCM 550 Seminar in International Communication.

Students should complete JRMCM 500 and 504 as early after admission to the program as possible. Because of the interdisciplinary scope of mass communication, students may,

with adviser approval, take and apply up to three 500-level courses (9 hours) from other disciplines. A maximum of six credit hours of 400-level coursework may be approved and counted toward the required credit hours.

Comprehensive Examination

Master of Arts students must complete JRM 500, 502, 504 and 550 in preparation for the comprehensive examination. The examination procedure is described in the "General Requirements" section. An oral examination may be required in addition to the written examination. Students must pass comprehensive examinations before being permitted to begin work on their theses.

Thesis

A thesis is required for all students. The department's thesis committee must approve the thesis topic after the student, in consultation with an advisor, submits a formal proposal. Written in English, the thesis must be defended by the student before faculty members, and must conform to current university requirements, policies and procedures.

Master of Arts Courses

JRM 500	Mass Communication Theory and Literature, 3 cr.
501	Advanced Reporting and Writing, 3 cr.
502	Current Issues in Mass Communication, 3 cr.
504	Research Methods in Mass Communication, 3 cr.
506	Internship, 3 cr.
550	Seminar in International Communication, 3 cr.
570	Seminar in Mass Communication and National Development, 3 cr.
580	Impact of Television: Issues and Developments, 3 cr.
590	Special Topics, 3 cr.

Graduate Diploma in Television Journalism

The diploma is intended to provide basic knowledge of the history and practice of television journalism. Students completing the program will have a working familiarization with all of the skills required of a video journalist-reporting, videotaping, writing and narrating a field report as well as proficiency in digital video editing and studio management. This program is intended for students who have not already specialized in broadcast journalism at AUC at the undergraduate level.

Admission

Requirements for the JMC Master of Arts program are applicable to applicants seeking a graduate diploma in television journalism. Applicants who have not taken JRM 201, or its equivalent at other institutions must take JRM 201 as a prerequisite prior to taking courses in the graduate diploma unless applicant has demonstrated professional news writing experience as determined by the Graduate Committee.

TV Graduate Diploma Courses

A minimum of six courses totalling 18 credit hours is required for the diploma.

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All students must take the following:

JPMC	506	Internship, 3 cr.
	537	Electronic Newsgathering, 3 cr.
	538	Broadcast News Voice, Speech and Presentation Workshop, 3 c.
	539	TV News Studio Workshop, 3 cr.
	541	Camera and Editing Workshop, 3 cr.
ALNG	421	Professional and Technical Writing (for Arabic Broadcasting), students can substitute any non-required JPMC graduate course for this requirement.

Journalism & Mass Communication Courses (JPMC)

500 Mass Communication Theory and Literature (3 cr.)

Offered in fall.

Survey of mass communication theory and the philosophical, sociological and political effects of mass media on audiences and societies.

501 Advanced Reporting and Writing (3 cr.)

Offered in fall.

Intensive reporting, research, and writing of in-depth articles for magazines and newspapers with intent to publish. Prerequisite: appropriate professional experience or undergraduate coursework (JPMC 201 and JPMC 301 or equivalent).

502 Current Issues in Mass Communication (3 cr.)

Offered in spring.

Overview of major issues in mass communication and how they impact audiences and society.

504 Research Methods in Mass Communication (3 cr.)

Offered in spring.

Introduction to scientific method and mass media research methods: field surveys, quantitative and qualitative research.

506 Internship (3 cr.)

Offered occasionally.

Field experience in an approved professional setting in journalism, advertising, public relations or public information. Supervised by a professional and an AUC full-time faculty member.

537 Electronic Newsgathering (3 cr.)

Same as JPMC 337. Prerequisite: JPMC 201 or its equivalent. Offered in fall and spring. Classroom and field training in the basics of electronic newsgathering. Instruction in theoretical principles that differentiate TV news scriptwriting from print journalism. Research project required.

538 Broadcast News Voice, Speech and Presentation Workshop (3 cr.)

Same as JPMC 338. Offered in fall and spring.

Workshop to improve vocal tone resonance and articulation, posture and breathing while presenting broadcast news and features. Emphasis on developing unobtrusive and clear enunciation of English. Research paper required.

539 TV News Studio Workshop (3 cr.)

Same as JPMC 339. Prerequisite: JPMC 201 or its equivalent. Offered in fall and spring.

Studio training and workshop application of television news and public affairs, broadcast studio production, with emphasis on studio camera work (including autocue) lighting and sound. Studio research project.

541 Camera and Editing Workshop (3 cr.)

Same as JPMC 441. Prerequisites: JPMC 537. Offered in fall and spring.

Intensive field and lab training with digital video camera. Computer-driven digital editing program enables video journalist to shoot and edit news events to a finished professional product. Related research project.

550 Seminar in International Communication (3 cr.)

Offered in fall.

World news communication systems, including news-gathering agencies; the role of foreign correspondents, the foreign press, information flow, propaganda and comparative press laws.

570 Seminar in Mass Communication and National Development (3 cr.)

Offered in spring.

The role of mass communication in developing nations and its relationship to economic growth, education, socialization, persuasion, and diffusion of innovation.

580 Impact of Television: Issues and Developments (3 cr.)

Offered in spring.

Media-specific issues and developments in television related to programming and production; production and delivery; technological bias and special problems such as piracy, television and religion, regulation and "equal time."

588 Comprehensives (no cr.)

Offered in fall and spring.

Individual consultation for students preparing for the comprehensive examination.

590 Special Topics (3 cr.)

Offered occasionally.

Content varies with the instructor. Can be repeated once for credit if content changes.

599 Research Guidance and Thesis (no cr.)

Offered in fall and spring.

Consultation with students as they prepare their theses.

LAW

Department of Law
School of Humanities and Social Sciences

Professors: E. Hill (Chair)

Assistant Professors: S. Garner (Senior Law Librarian), N. Modirzadeh (Director of International Human Rights Law), H. Sayed, A. Shalakany (Director of LL.M.)

Instructor: D. Van Bogaert

The Ibrahim Shihata Memorial LL.M Program in International and Comparative Law

Dr. Ibrahim Shihata, in whose memory this LL.M has been established, made significant contributions to the development of international economic law. In addition to his positions of Senior Vice President and General Counsel with the World Bank, Dr. Shihata also served as Secretary-General of the International Center for the Settlement of Investment Disputes; he was principal architect of the Multilateral Investment Guarantee Agency (MIGA); and he was responsible for the World Bank Guidelines for the Legal Treatment of Foreign Investments. Other positions included first Director General of the OPEC Fund for Economic Development and General Counsel of the Kuwait Fund. He was instrumental in establishing the Inter-Arab Investment Guarantee Agency, and he was the founder of the International Development Law Institute in Rome. Indeed the entire career of Dr. Shihata was devoted to the infrastructures that assisted development. The LL.M program itself, as well as individual courses, are directly concerned with law and development. In Dr. Shihata's words: "Law, as the formal instrument of orderly change in society, plays a pivotal role, even though this role has not always been readily recognized."

The Master of Laws (LL.M) Degree in International and Comparative Law is intended for law school graduates who seek legal training that will enable them to work effectively in Egypt's developing free market economy, whether in courts, government offices, the foreign service, or public and private business sectors, with commitment to the rule of law from increased knowledge about the laws that govern market economies and liberalized societies, nationally and internationally. Accordingly, the new program offers basic courses and courses in specialized areas designed to increase capacities to promote economic, social, and legal development.

Admission

Students seeking to enter AUC to work for the LL.M degree must have a first degree in Law with a grade of gayyid (or 2.7 / B- grade point average) or its equivalent for full admission. Students lacking this level may be eligible to be considered for provisional

admission (as specified in the AUC catalogue supra). Acceptance is by decision of the Law Faculty Committee, which may prescribe prerequisite work. English proficiency is required as demonstrated on the TOEFL test.

Requirements

The LL.M degree requires eight courses (24 credit hours) as well as a thesis of sufficient depth and length for the topics addressed therein and prepared under the supervision of a faculty member of the department. Three courses are required; LAW 500, LAW 502 and either LAW 501 or LAW 503. For the remaining courses, students have free choice from among those offered each semester. Fulfilling the LL.M. degree normally calls for two years of study.

LL.M Courses (LAW)

500 Legal Practice Workshop (3 cr.)

A workshop designed to develop the lawyering skills in research, drafting, legal argument and oral presentation, especially with respect to practice in transnational legal problems and settings. Required of all students in the LL.M program.

501 Jurisprudence (3 cr.)

What is Justice? What is Law? These are questions that have animated discussion for many centuries and in various cultural contexts. This course will examine ideas and theories of justice and law as found in writings of jurists and other commentators, their critics and detractors.

502 Comparative Law (3 cr.)

Required of all students in the LL.M program.

Introduction to the main differences between Civil Law and Common Law systems with respect to selected problems regulated under public and private law regimes. The comparative study will concentrate on the American, German, and French legal systems.

503 Law and Economic Development (3 cr.)

Exploration of the relationship between different strategies of economic development and legal reforms in the public and private spheres from a comparative law perspective.

504 European Union Law (3 cr.)

Same as EUST 504.

Introduction to the major institutions and decision making procedures of the European Union's constitutional structure as well as the foundational doctrines and processes developed by the EU judicial system.

505 Islamic Law Reform (3 cr.)

Exploration of different approaches to reforming Islamic law in the Arab World from the mid-nineteenth century to the present, paying special attention to contemporary developments in Arab legal systems.

521 Transnational Business Law (3 cr.)

Prerequisite: LAW 502.

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Legal norms and practices regulating transnational business transactions, and the various corporate and legal actors involved, with a practical emphasis on resolving a variety of staple transnational business problems.

522 International Economic and Trade Law (3 cr.)

Rules of law and policy of economic relations under the GATT/WTO system, as well as regional agreements on trade partnerships between the European Union and the Arab Mediterranean.

523 International Commercial Arbitration (3 cr.)

Prerequisite: LAW 502.

The law of international commercial arbitration considered from a comparative perspective in major Civil and Common Law jurisdictions, as well as its practice in the context of international transactions.

524 Comparative Corporate Governance (3 cr.)

Prerequisite: LAW 502.

Comparison of how select questions of corporate governance, control, and finance are regulated under American, French, German, and Egyptian corporate law.

525 Securities Regulation Law (3 cr.)

Prerequisite: LAW 502.

Legal and institutional framework for the offering, purchase and sale of investment securities under US, EU and Egyptian law, with special attention to national and transnational aspects of securities fraud.

526 Antitrust Law (3 cr.)

Prerequisite: LAW 502.

Basic principles of antitrust regulation in the US from the Sherman Act to the present, compared with recent developments in EU law, and with the potential for regulation under the current antitrust bill before the Egyptian parliament.

570 Special Topics in Comparative Law (up to 3 cr.)

In addition to allowing the resident faculty to give special topics seminars as regular 3 credit courses, this course as well as LAW 571 and LAW 572 are used to accommodate the short courses that distinguished visiting lecturers give, with varying credit values depending on the number of hours covered.

571 Special Topics in International Law (up to 3 cr.)

572 Special Topics in Public Law (up to 3 cr.)

Prerequisite: Permission of the Department.

598 LL.M. Independent Study (1 cr.)

Prerequisite: Permission of the Department.

599 Research Guidance/Thesis Supervision (no cr.)

Master of Arts in International Human Rights Law

International Human Rights Law considers protection of the individual as developed through organs of the United Nations, other international institutions, and at regional and domestic levels in the North and in the South. The program seeks to give students a thorough grounding in the theoretical underpinnings of human rights law and in the methods of solid multidisciplinary research that are required for investigating legal issues pertaining to human rights. It is intended for those presently working, or desiring to work, in humanitarian organizations, in government departments and agencies concerned with humanitarian issues, or in other public, private and international sectors where there is increasingly a need for persons who have an understanding of the law and legal consequences of human rights within an international framework.

It is possible to work towards the MA in International Human Rights Law and the Diploma in Forced Migration and Refugee Studies (FMRS) simultaneously or sequentially, and to cross count 4 courses (12 credits) with the advice and consent of the department for a total of eleven courses (see Dual Graduate Degrees under Academic Requirements and Regulations section).

Admission

The applicant for admission to the MA program should have an acceptable bachelor's degree in law, political science or a closely related social science (preferably with a minor in political science or law studies), and an overall grade of gayyid giddan or a grade point average of 3.0. Applicants with deficiencies in their preparation may be required to take appropriate courses at the undergraduate level.

Course Requirements

The International Human Rights Law MA degree requires IHRL 510, IHRL 511, IHRL 512, IHRL 513, IHRL 514, and IHRL 515. The remaining three courses are electives, for a total of 27 credit hours.

Thesis Requirements

Prerequisite: Permission of the department

The research requirement for the M.A. in International Human Rights Law is satisfied by writing a thesis of sufficient depth and length for the topic addressed therein and prepared under the supervision of a faculty member of the department. To register for the thesis, students normally are expected to have finished all or almost all coursework. Details about this requirement are available in the Department office.

Degree Time Framework:

Fulfilling the M.A. in International Human Rights Law normally calls for two years of study.

M.A. Courses in International Human Rights Law (IHRL)

510 International Human Rights Law (3 cr.)

This gateway course for the specialization in International Human Rights Law will locate human rights institutions, norms, and debates within western and non-western frameworks. Particular conditions that surround the enforcement of international human rights norms in non-western contexts will be explored through philosophical and historical inquiry, to serve as the basis for understanding issues raised in subsequent topical courses.

511 Research and Writing for International Human Rights Law (3 cr.)

An exploration of sources for research into Human Rights Law and the means of locating and analyzing human rights legal issues that will allow students to undertake intelligently formulated and executed research and in the conventions of presenting the results of research in various formats, in preparation for the more specialized work in subsequent courses, thesis, and future work in the field.

512 Human Rights and the United Nations (3 cr.)

The framework and evolution of international human rights law within the system established by the United Nations Organization examined in relation to its antecedents, establishing documents, processes of norm creation and application, and present methods and activities of monitoring within the UN system.

513 The European and Inter-American Systems of Human Rights Protection (3 cr.)

Same as EUST 513.

Examination of the procedures and substantive law contained in conventions, treaties, reports, judgments, and other documents will be examined for a comprehensive understanding of the development of human rights law in Europe and in North and South America. These human rights systems are considered in relation to their origins in social and political movements and their subsequent effects on politics and society.

514 Human Rights in the Middle East and Africa (3 cr.)

Relevant conventions, rules, decisions, and cultural norms and practices in Africa and the Middle East will be explored to provide an understanding of the legal approaches to the protection of human rights.

515 Comparative Constitutional Law and Human Rights (3 cr.)

How constitutional rights, concepts and practices have emerged and developed within contemporary governments. Emphasis will be on the analysis of civil, political, economic, social and cultural rights together with freedoms and liberties protected by various constitutions, considered within their social and political contexts.

516 Economic, Social, and Cultural Rights (3 cr.)

Consideration of the historical development of the recognition of economic, social and cultural rights together with present covenants and other instruments operating at the international level. Specific rights such as the right to work, trade union rights, right to social security, right to adequate standards of living, health and education are considered as well as their philosophical underpinnings and social modalities.

517 The protection of Vulnerable Groups: Women and Children (3 cr.)

Examinations of various concepts related to the protection of the rights of women and children including the social and political environments in which such rights have emerged. Instruments and mechanisms for the protection of these groups will be considered in relation to their perceived vulnerabilities.

518 International Refugee Law (3 cr.)

A consideration of the dynamics between the legal rights of forced migrants and the privilege of states to grant asylum. This course is required of all students seeking the diploma in Forced Migration and Refugee Studies.

598 M.A. Independent Study (1 cr.)

Prerequisite: Permission of the department.

599 Research Guidance/Thesis Supervision (no cr.)



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Department of Management

School of Business, Economics and Communication

Professors: M. Abaza, S. Akabawy (Associate Vice President for Computing), B. Dodin, F. El Hitami, H. El Sherif, S. Farag, R. Fullerton, T. Hatem, M. Hassanein, H. El Karanshawy, A. Mortagy (Dean of the School of Business, Economics and Communication), E. Stuart, E. H. Valsan (Emeritus), S. Youssef, O. Zaki

Associate Professors: M. Badran, I. Hegazy (Chair), S. Imam, S. Kamel, D. Rateb, M. El Shinnawy, H. Yassin

Assistant Professors: M. Askar, K. Dahawy, H. Harlow, M. Krueger, E. Tooma

Participating Faculty: H. Abdalla, Y. Hassan, A. Kais, I. El Sebai, A. Taher

Vision

The vision of the Department of Management is to be a leading business learning institution in the region offering high quality academic programs comparable to those at the best universities worldwide.

Mission Statement

The mission of the Department of Management is to develop business leaders who are dedicated to the betterment of the society by providing a high quality business education to top caliber students from all segments of the Egyptian society as well as from other countries while focusing on continuous improvement and commitment to excellence in learning, intellectual contributions and services.

In support of this mission the department:

- Provides a high quality contemporary – style business education that blends a global perspective with national cultures and is relevant to the business needs of Egypt and the region.
- Provides programs that encourage the development of an entrepreneurial spirit that emphasizes creativity, innovation, individual initiative and teamwork.
- Provides learning environment that fosters faculty/student communication and promotes lifelong learning and career development.
- Encourages faculty development activities that improve teaching, maintain competence and keep faculty current with ideas and concepts in their fields.
- Seeks to develop a portfolio of intellectual contributions to learning and pedagogy, to practice, and to the theory and knowledge base of the disciplines.
- Encourages the establishment of close partnerships with the business community through consultancies and service that enhance the intellectual and economic quality of Egypt while enriching the learning process.

Core Values

In support of the mission, the faculty and staff are committed to share core values

that promote:

- Individual excellence
- Personal integrity and ethical professional behavior
- Collaboration, contribution, and inclusiveness
- Life-long learning
- Continuous improvement
- Adaptation to a changing global environment
- Social responsibility and community service

Master of Business Administration (MBA)

The MBA is a professional degree designed to prepare students who have completed undergraduate work in any academic discipline and intend to pursue a management career. The curriculum emphasizes the principles underlying business operations as well as advanced technical knowledge in relevant specializations. It provides tools for analysis and helps develop a managerial perspective. Advanced specialized and elective courses provide the necessary skills in a functional area of business.

Admission

All applicants must satisfy the university's graduate admission requirements and obtain an acceptable score on the Graduate Management Admission Test (GMAT). In addition, applicants should have two or more years of relevant professional experience.

To obtain the MBA degree, a minimum of 33 semester credit hours and a maximum of 48 credit hours are required. The exact number of credits will be determined according to the educational background of each candidate.

MBA Core (6-24 credits)

Coursework for the core is directed at providing the student with a basic background in the various functional areas of management. Between two and eight courses are required for the completion of the core. These courses are usually chosen from the following list:

ACCT	501	Financial Reporting, 3 cr.
FINC	540	Financial Management, 3 cr.
MKTG	520	Marketing Management in a Global Economy, 3 cr.
MGMT	501	Business Communication and Negotiation, 3 cr.
MGMT	502	Managing Organizations, 3 cr.
OPMG	507	Quantitative Analysis for Management, 3 cr.
OPMG	520	Operations Management for Competitive Advantage, 3 cr.
MOIS	508	Management Information Systems, 3 cr.

MBA Electives and Concentration (21 credits)

Advanced coursework for the MBA constitutes a diversified program aiming at

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providing the student with:

- a. General background in the concepts, processes, and institutions of finance, marketing, personnel, and operations management.
- b. Decision-making tools and techniques such as accounting, quantitative methods, and management information systems.
- c. Organizational theory, economic analysis, and business policy and strategy.

Students must take a minimum of 12 credit hours that covers at least four of the following business areas:

Accounting
Finance
Management
Management of Information Systems
Marketing
Operations Management

Students may concentrate in one of these areas by taking at least three courses in that area (9 credit hours).

Accounting

ACCT	502	Cost Analysis and Control, 3 cr.
	503	Financial Analysis, Planning and Valuation, 3 cr.
	504	Budgeting and Financial Planning, 3 cr.
	505	International Accounting, 3 cr.
	570	Selected Topics in Accounting and Auditing, 3 cr.

Finance

FINC	541	Advanced Topics in Finance and Investment, 3 cr.
	542	International Financial Management, 3 cr.
	543	Financial Markets, 3 cr.
	544	Advanced Corporate Finance, 3 cr.
	545	Private Equity and Venture Capital, 3 cr.
	546	Financial Analysis, Planning and Valuation, 3 cr.
	570	Selected Topics in Financial Management, 3 cr.

Management

MGMT	503	Organizational Development, 3 cr.
	504	Human Resources Strategy, 3 cr.
	505	Organizational Design, 3 cr.
	506	Management of International Business Operations, 3 cr.
	507	Global Business Strategy, 3 cr.
	570	Selected Topics in Management, 3 cr.

Management of Information Systems

MOIS	508	Management Information Systems, 3 cr.
	549	Business Systems, 3 cr.
	550	Information Technology, 3 cr.
	551	Electronic Business, 3 cr.
	555	Information Strategy, 3 cr.
	570	Selected Topics in Management of Information Systems, 3 cr.

Marketing

MKTG	521	Marketing Research, 3 cr.
	522	Marketing Channels and Distribution Management, 3 cr.
	523	Sales Management, 3 cr.
	524	International Marketing, 3 cr.
	525	Marketing Strategy, 3 cr.
	526	Marketing Communications Management, 3 cr.
	570	Selected Topics in Marketing, 3 cr.

Operations Management

OPMG	521	Supply Chain and Logistics, 3 cr.
	528	Project Management, 3 cr.
	530	Data Analysis, 3 cr.
	531	Stochastic Models in Managerial Decision Making, 3 cr.
	532	Operations Strategy, 3 cr.
	533	Business Dynamics, 3 cr.
	570	Selected Topics in Operations Management, 3 cr.

MBA Capstone Course (3 credits)

Finally, a capstone course, MGMT 508 Strategic Business Management is required for all MBA candidates.

Master of Public Administration (MPA)

The MPA degree is designed for government and public-sector personnel and students interested in public policy for advanced academic and professional preparation in public administration.

Admission

Applicants must satisfy the university's general requirements for graduate admission. Those sponsored by a government agency, public-sector company, or international organization, and with at least two years' professional or academic experience in public administration will be given special consideration for admission.

Prerequisite Courses

Applicants lacking adequate preparation will be required to take one or more of the

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following prerequisite courses (credit earned in these courses shall not count towards the M.P.A. degree):

MGMT	501	Business Communication and Negotiation, 3 cr.
OPMG	507	Quantitative Analysis for Management, 3 cr.
PADM	510	Theory and Practice of Public Administration, 3 cr.

Courses

A minimum of nine courses (27 credit hours) is required from the list shown below. For applicants lacking adequate preparation in social sciences, the department may require additional courses.

Courses for the M.P.A. constitute a structured program aimed at providing:

- a) Conceptual basis in the areas of organization, personnel, finance, and development administration
- b) Exposure to important tools of management applicable to public administration situations
- c) Analytical skills appropriate for the study of the environmental aspects of public policy implementation

Required courses: Six out of the following as advised:

PADM	500	Methods of Administrative Research and Analysis, 3 cr.
	504	Organizational Behavior, 3 cr.
	505	Administrative Environment and Public Policy in Egypt, 3 cr.
	513	Management of Public Funds, 3 cr.
	514	Problems of Development Administration, 3 cr.
	517	Administration of Developmental Planning, 3 cr.
	521	Administration of Public Personnel, 3 cr.

A student taking all seven courses is permitted to include one of them as an elective.

Electives : Three courses chosen with the permission of the adviser.

Comprehensive Examination

The comprehensive examination is written and may be supplemented by an oral examination.

Thesis

M.P.A. students are normally required to write a thesis on some aspect of public administration. Students who do not intend to seek accreditation by the Egyptian Supreme Council of Universities may take two courses in lieu of the thesis requirement.

Courses

Accounting (ACCT)

501 Financial Reporting (3 cr.)

Offered in fall and spring.

This is a basic course in financial accounting covering financial reporting by business entities. It develops the framework for the analysis, classification, reporting, and disclosure of business transactions. The preparation and interpretation of financial statements and reports are emphasized.

502 Cost Analysis and Control (3 cr.)

Prerequisite: ACCT 501. Offered in fall and spring

This course focuses on the design and assessment of various cost management and control systems. The emphasis is on building a general framework for choosing among alternative cost systems for operational control and product cost and profitability measurement. The course covers recent conceptual and analytical developments in the area of management accounting; including a study of modern and relevant planning and control techniques and their underlying concepts as applied to various functional areas within the firm.

503 Financial Analysis, Planning and Valuation (3 cr.)

Same as FINC 546. Prerequisite: ACCT 501 and FINC 540. Offered in fall.

The course focuses on the framework, concepts and tools for planning business decisions and valuation. Topics discussed include forecasting financial statements, discounted cash flow techniques, alternative valuation methods and the implementation of capital budgets.

504 Budgeting and Financial Planning (3 cr.)

Prerequisite: ACCT 502. Offered in spring.

This course studies the concepts, methods and uses of managerial accounting information with an emphasis on planning and control in organizations. It develops: (1) an understanding of the budgeting and budgets as basic concepts employed by managers to plan and control business processes, and to achieve organizational objectives and strategies; (2) an understanding of information measurement and communication methods employed in management control and accounting information systems; and (3) an evaluation of measures to assess the effectiveness and efficiency of management operations.

505 International Accounting (3 cr.)

Prerequisite: ACCT 502 and ACCT 503. Offered occasionally.

Introduction to the conceptual, managerial, professional, and institutional issues of international accounting. Focus is on current topics in international accounting and on the cultural, environmental, managerial, and governmental forces that shape both

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internal and external accounting in specific countries. Special attention is set for comparative and empirical studies. Current interest topics that include standard setting and transnational financial reporting are explored.

570 Selected Topics in Accounting and Auditing (3 cr.)

Prerequisites: consent of the instructor. Offered occasionally.

It considers selected topics of current relevance in Accounting and Auditing.

Finance (FINC)

540 Financial Management (3 cr.)

Prerequisite: ACCT 501. Offered in fall and spring.

It is a basic business finance course, dealing with various aspects of financial decision making. It provides an introduction to time value of money; bond and stock valuation; ratio analysis; financing decisions; capital budgeting; cost of capital; capital structure; risk and return; dividend policy; operating and financial leverage; and working capital management.

541 Advanced Topics in Finance and Investment (3 cr.)

Prerequisite: FINC 540. Offered in spring.

This course focuses on securities, markets and the pricing of capital assets. Topics covered include asset pricing models, efficient markets, models for portfolio selection as well as options and other derivatives.

542 International Financial Management (3 cr.)

Prerequisite: FINC 540. Offered in fall.

The course covers conceptual and practical aspects of international finance through in-depth analysis of working capital management, international financial markets, exchange rate determination, and exchange rate risk exposure and management.

543 Financial Markets (3 cr.)

Prerequisite: FINC 540. Offered in fall.

The course focuses on financial markets, its institutions, instruments, and major governing regulations. Topics such as the function and role of financial markets in the economy, money and capital markets equilibrium, interest rate analysis, major financial institutions, fund raising instruments, and risk management instruments are emphasized.

544 Advanced Corporate Finance (3 cr.)

Prerequisite: FINC 541. Offered in fall.

This course covers recent theories and related empirical evidence in corporate finance. It explores implications of major financing and investment decisions made by different firms. The financing decisions focus on the available alternatives to finance the firm. The investment decisions involve the study of capital budgeting and the role of 'real options' in a strategic context.

545 Private Equity and Venture Capital (3 cr.)

Prerequisite: FINC 540. Offered occasionally.

The course focuses on private equity and venture capital cycles. Emphasis is placed on the valuation concepts and their application to privately held companies. Case studies are an integral part of the course.

546 Financial Analysis, Planning and Valuation (3 cr.)

Same as ACCT 503. Prerequisite: FINC 540. Offered in fall.

The course focuses on the framework, concepts and tools for planning business decisions and valuation. Topics discussed include forecasting financial statements, discounted cash flow techniques, alternative valuation methods and the implementation of capital budgets.

570 Selected Topics in Financial Management (3 cr.)

Prerequisites: consent of the instructor. Offered occasionally.

It considers selected topics of current relevance in Financial Management.

Management (MGMT)**501 Business Communication and Negotiation (3 cr.)**

Offered in fall and spring.

It explores the strategies and techniques of one of the most crucial skills needed for success in business. The course introduces students to theories of communication and how to translate theories into complete strategies for communicating with diverse audiences. The course focuses on written communications including memoranda, letters, executive summaries, and business and research reports. The course also focuses on oral communications including listening, presentation skills, interviewing, conducting meetings, and interpersonal communication. Course content also includes negotiation, intercultural communication, and the importance of communication in team building.

502 Managing Organizations (3 cr.)

Offered in fall and spring.

It covers topics such as management fundamentals, managing the local and global environment, emotional intelligence, organizational learning, ethical considerations, and value pluralism in management.

503 Organizational Development (3 cr.)

Prerequisite: consent of instructor. Offered in fall.

Process of introducing change in business organizations, techniques and tools of introducing change for the purpose of increasing efficiency and effectiveness, change strategies to meet environmental threats are some of the topics that are explored in this course.

504 Human Resources Strategy (3 cr.)

Offered in spring.

This course focuses on advanced study of dynamics of personality, primary group,

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organization and culture, the nature of conflict and motivation, interpersonal and group behavior, and critical analysis of behavior literature and its application to the field of management.

505 Organizational Design (3 cr.)

Prerequisite: MGMT 502 or equivalent. Offered occasionally.

The course covers topics like strategy and structure, vertical and horizontal integration, structural options, process of organizational design, the concept of fit, designing jobs and organizational units and control elements in the design of organizations.

506 Management of International Business Operations (3 cr.)

Offered occasionally.

In this course attention is given to principles, practices, and problems of managing international business activities, entry decision, supply strategy, ownership and control, labor and legal issues, and the financial and management implications of conducting business in foreign countries.

507 Global Business Strategy (3 cr.)

Prerequisite: MGMT 506 or consent of instructor. Offered occasionally.

The course brings the tools and information gained in prior courses in international business to bear on managerial problems in various international and Middle Eastern environments. The course makes extensive use of cases in the field.

508 Strategic Business Management (3 cr.)

This is the capstone course for the MBA program. Offered in fall and spring.

The course covers alternative models of strategy development and the process of formulating, implementing, and evaluating business strategies. Reaction of business firms to environmental changes, and threats are emphasized.

570 Selected Topics in Management (3 cr.)

Prerequisites: consent of the instructor. Offered occasionally.

It considers selected topics of current relevance in Management.

Management of Information Systems (MOIS)

508 Management Information Systems (3cr.)

Offered in fall and spring.

Today information systems are an integral part of different business processes and business functions contributing effectively to organizational activities. This course demonstrates how information systems solutions help overcome business and organizational challenges.

549 Business Systems (3cr.)

Prerequisite: MOIS 508. Offered in fall and spring.

This course provides a comprehensive review of systems analysis and design. It examines how an organization can improve its existing systems through the identification of business processes required to effectively manage the organization, create

new opportunities, improve effectiveness, and enhance competitiveness.

550 Information Technology (3cr.)

Prerequisite: MOIS 508. Offered occasionally.

This course surveys the building blocks of information technology including hardware, software, networks, and people and business applications while emphasizing an open systems approach that considers market trends such as globalization, time and information technology integration.

551 Electronic Business (3cr.)

Prerequisite: MOIS 508 and MOIS 550. Offered occasionally.

The course covers the current managerial practices, opportunities and challenges of different information and communication tools and techniques in transforming the way business is being conducted in the digital economy including different business and marketing strategies and models, infrastructure and security requirements.

555 Information Strategy (3cr.)

Prerequisite: MOIS 508 and MOIS 550. Offered occasionally.

Information is an integral part in organizational success paralleling the importance of its technology component. This course explores the importance and value proposition of an information strategy and its relationship with other organizational strategies.

570 Selected Topics in Management of Information Systems (3 cr.)

Prerequisites: consent of the instructor. Offered occasionally.

It considers selected topics of current relevance in Management of Information Systems.

Marketing (MKTG)

520 Marketing Management in a Global Economy (3 cr.)

Offered in fall and spring.

This course focuses on the analysis and management of marketing systems, characteristics of marketing systems, the management of marketing activities of the firm, physical distribution management, and social performance of marketing.

521 Marketing Research (3 cr.)

Prerequisite: MKTG 520. Offered occasionally.

It takes a comprehensive look at both the principles and practices of marketing research with balanced coverage of qualitative and quantitative material. Taught from a managerial perspective, the course emphasizes emerging trends in marketing research, ethical and global implications, and the continuing integration of technologies including statistical software.

522 Marketing Channels and Distribution Management (3 cr.)

Prerequisite: MKTG 520. Offered Occasionally.

Emphasis is placed on topics like the design, development, and maintenance of effective relationships among channel members to achieve sustainable competitive

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advantage by using both strategic and managerial frames of reference, strategies for planning, organizing, and controlling the alliances among the institutions, agencies, and in-house units that bring products and services to market and the way in which marketing channels can provide customer service - both for the end-users they serve and the organizations that comprise them.

523 Sales Management (3 cr.)

Prerequisite: MKTG 520. Offered occasionally.

It undergoes a comprehensive examination of the major functions of sales force management, the development and organizational structure of a sales force and determination of sales force size, the recruitment, selection, training of sales executives, and techniques for leadership, motivation, compensation, control and evaluation of the sales force.

524 International Marketing (3 cr.)

Prerequisite: MKTG 520. Offered occasionally.

Topics like management of export and international marketing systems, with emphasis on Egyptian export opportunities, procedures, market areas, and problems are explored.

525 Marketing Strategy (3 cr.)

Prerequisite: MKTG 520. Offered occasionally

It is an advanced course designed to build students' understanding, working knowledge, and use of marketing strategy concepts and to develop students' ability to think strategically. Focuses on creating value for customers and the strategic marketing choices made by top management that have an influence on an organization's performance and competitive success.

526 Marketing Communications Management (3 cr.)

Prerequisite: MKTG 520. Offered occasionally.

Management of the external communication mix of an enterprise, the inward flow of market intelligence such as market research, sales reports, competitive actions, the outward flow of sales messages through personal selling, use of mass communication, and brand and corporate image building are some of the discussed topics.

570 Selected Topics in Marketing (3 cr.)

Prerequisites: consent of the instructor. Offered occasionally.

It considers selected topics of current relevance in Marketing.

Operations Management (OPMG)

507 Quantitative Analysis for Management (3 cr.)

Offered in fall and spring.

This course is considered as an introduction to recent developments in quantitative techniques with special emphasis on management applications, techniques include linear programming, descriptive statistics, probability, expectations, games and decisions, testing of hypotheses, analysis of variance, and operations research.

520 Operations Management for Competitive Advantage (3 cr.)

Offered in fall and spring.

The objective of this course is to introduce students to concepts and techniques related to the design, planning, control, and improvement of manufacturing and service operations. The course begins with a holistic view of operations, where the coordination of product development, process management, and supply chain management is stressed. As the course progresses, students will investigate various aspects of each of these three tiers of operations in detail. The course will cover topics in the areas of process analysis, materials management, production scheduling, quality improvement, and product design.

521 Supply Chain and Logistics (3 cr.)

Prerequisites: OPMG 507, OPMG 520 or consent of the instructor. Offered in fall.

The objective of the course is to explore the key capabilities that a supply chain must develop to support the business strategy of a firm and the relationship between the desired capabilities and the structure of a supply chain. The course defines supply chain structure in terms of the following drivers of performance: facilities, information, inventory and transportation. The relationship between structure and performance is analyzed using case studies and analytical models. The course will also discuss methodologies for designing and planning a supply chain

528 Project Management (3 cr.)

Prerequisites: OPMG 507, OPMG 520 or consent of the instructor. Offered in fall.

This course covers management techniques that are applicable to a wide variety of project types including new product development, business start-ups, marketing campaigns, facility relocations, construction, research programs, and special events. Emphasis is on scheduling, budgeting, and control including the selection and application of project management software. Other topics include project organization, qualifications and roles of the project manager, project leadership, team building, and the management of conflict and stress in projects

530 Data Analysis (3 cr.)

Prerequisites: OPMG 507, OPMG 520 or consent of the instructor. Offered in fall.

This course uses the Excel/VBA environment for developing models. Students will develop spreadsheets and write programs for forecasting, financial price simulation, option pricing, and financial statements. Add-ins are used for optimization, simulation, and decision analysis

531 Stochastic Models in Managerial Decision Making (3 cr.)

Prerequisites: OPMG 507, OPMG 520 or consent of the instructor. Offered in spring.

This course presents a normative approach to making decisions in one's personal and professional life. The first half of the course introduces the fundamentals of decision analysis: probabilistic modeling, preference modeling and the Markov process, decision tree construction and rollback, the value of imperfect and perfect information. The

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second half of the course stresses how decision analysis is used in real-world practice. Topics include sensitivity analyses, influence diagrams, stochastic dominance, probabilistic encoding and tornado diagrams and Analytical Hierarchy Process (AHP).

532 Operations Strategy (3 cr.)

Prerequisites: OPMG 507, OPMG 520 or consent of the instructor. Offered in spring. Operations strategy examines how manufacturing and operations can be used as sources of competitive advantage. As the global curtain draws back to expose more and more operations to the mounting pressures of worldwide competition, there are fewer places for laggard operations to hide. The context in which the operations manager now works - a global context facilitated by a high degree of electronic interconnectedness - has changed to one that emphasizes innovative system design and dramatic operations improvement over simple administration.

533 Business Dynamics (3 cr.)

Prerequisites: OPMG 507, OPMG 520 or consent of the instructor. Offered in spring. This course introduces modeling methods that can enhance your strategic thinking skills. Students will learn a flexible and powerful approach to structuring managerial problems and visualizing the interconnections that make business systems dynamic. The course applies strategic modeling to a broad spectrum of cases including: growth management, human resource policy, competitive strategy, public policy, and managing in cyclical industries. During the course students can work through the challenge of structuring and modeling their own business problem. In addition they will examine cases of companies that have used strategic modeling successfully.

570 Selected Topics in Operations Management (3 cr.)

Prerequisites: consent of the instructor. Offered occasionally. It considers selected topics of current relevance in Operations Management.

Public Administration (PADM)

500 Methods of Administrative Research and Analysis (3 cr.)

Offered in fall.
Research design, implementation, and reporting using library sources and field investigation. Symbolic logic, statistical methods, set theory, and other mathematical tools.

503 Management Communications (3 cr.)

Offered in fall and spring.
It explores the strategies and techniques of one of the most crucial skills needed for success in business. The course introduces students to theories of communication and how to translate theories into complete strategies for communicating with diverse audiences. The course focuses on written communications including memoranda, letters, executive summaries, and business and research reports. The course also focuses on oral communications including listening, presentation skills, interviewing, conducting meetings, and interpersonal communication. Course content also includes negotiation, intercultural communication, and the importance of communication in team building.

504 Organizational Behavior (3 cr.)

Offered in spring.

Human behavior in public organizations, theories of motivation, leadership, group dynamics, power, communication, and ethical behavior in organizations.

505 Administrative Environment and Public Policy in Egypt (3 cr.)

Offered in spring.

Major concepts of administrative environment and public policy; formulation and implementation of public policy in Egypt.

510 Theory and Practice of Public Administration (3 cr.)

Offered in fall and spring.

Major concepts of public administration; planning, organizing, staffing, directing, coordinating, reporting, decision making, and budgeting in government departments and public enterprises.

513 Management of Public Funds (3 cr.)

Offered in fall.

The role of central government and local government in management of funds. Discussion of various criteria for estimating public expenditure and methods of raising required funds. Issues relating to tax administration, public-sector management as a source of public revenue, and management of public debt.

514 Problems of Development Administration (3 cr.)

Offered in fall and spring.

Analysis of theories of development administration. Economic development and its administrative implications. Case discussion of administrative problems of developing countries and measures undertaken for administrative reforms.

516 Comparative Administration (3 cr.)

Offered in fall.

Public administration systems of selected countries, both developed and developing. Models of bureaucracies of developing countries compared with those of other countries.

517 Administration of Developmental Planning (3 cr.)

Offered in spring.

Concepts of developmental planning and administration. Organizational and procedural aspects of planning on the national and subnational levels. Practical experience of various countries with special emphasis on developing countries at the national level.

518 Local Government and Development (3 cr.)

Offered occasionally.

Theory of local government with implications for practical application. Organization,

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personnel, and finance for local administration in Egypt. The role of local government in local and national development.

521 Administration of Public Personnel (3 cr.)

Offered in spring.

Study of major concepts and methods of personnel administration in governmental organizations; recruitment, training, promotion, service conditions, and retirement practices and benefits.

545 Administration of International Organizations (3 cr.)

Offered in spring.

Administration of international organizations and developmental activities undertaken through them; personnel for global responsibility; recruitment and service conditions; financial management in international administration.

546 Urban Environmental Management (3 cr.)

Offered in spring.

Environmental constraints in planning, resource allocation and program management in the urban sector. Policy implications for reform proposals.

547 Environmental Policy and Administration (3 cr.)

Offered in fall.

Policy initiation, agenda setting, decision-making, implementation and evaluation. Critical study of national and international experience.

588 Comprehensives (no cr.)

Offered in fall and spring.

Individual consultation for students preparing for the comprehensive examination.

599 Research Guidance and Thesis (no cr.)

Offered in fall and spring.

Materials and Manufacturing

See Engineering

Middle Eastern History

See Arabic Studies

MIDDLE EAST STUDIES

School of Humanities and Social Sciences

Director: Bahgat Korany

Middle East Studies is an academic program designed to provide students with a comprehensive understanding of the peoples, societies and economies of the region. The graduate program offers courses in Arabic language and literature, anthropology, economics, history, political science and sociology with the purpose of introducing students to a variety of methodologies for studying the Middle East. The graduate program focuses on the period from the 18th century onwards and addresses issues of religion, ecology, history, economy, society, polity, gender, and culture. Given the geographical location of Cairo, the program as a whole concentrates on the Arab region. The program is intended for students who wish to pursue a variety of careers such as academia, diplomacy, other government service, work with NGOs, development, business, finance, journalism, public relations and cultural affairs.

Master of Arts

The master's degree program in Middle East Studies is an interdisciplinary degree program. Applicants for admission should have an undergraduate degree of high standing (B grade or higher). Prerequisites are often assigned depending on the individual student's academic background. The program is designed to meet the needs of professionals who need in-depth knowledge of the modern Middle East. A thesis is optional. Students should take the six concentration courses and either four additional courses and sit for the comprehensive exam or two additional courses and submit a thesis.

Language

In addition to normal university requirements in English, students must demonstrate proficiency in Modern Standard Arabic:

1. If the student chooses to take Comprehensive Examination, the level of proficiency would be equivalent to the AUC Arabic Language Institute's course ALNG 201.
2. If the student chooses to write a Thesis, the level of proficiency would be equivalent to the AUC Arabic Language Institute's course ALNG 311 (an advanced level specified by the guidelines of the American Council for the Teaching of Foreign Languages).

In both the above cases, proficiency is tested by examination. Students who have no background in Arabic should enroll first in the Arabic Language Institute's full-time intensive Arabic program. Arabic language training is offered by AUC's Arabic Language Institute, which also administers proficiency tests. Students who choose a Thesis and whose proficiency is between low intermediate and advanced are encouraged to take Arabic language courses in addition to their academic courses until they fulfill the proficiency requirement. They are also encouraged to enroll in intensive Arabic language summer programs.

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Comprehensive Examination

At the completion of all course requirements an examination is administered by an interdisciplinary examining board. An oral examination will be given immediately following the written test if further evidence of the candidate's knowledge is deemed necessary by the department.

Courses

Ten courses are required for the degree. Those choosing the thesis option are required to present a thesis and register for eight courses. All students must take the following **six** courses:

ARBS	451	Islamic Institutions, 3 cr.
ARBS	543	Seminar on the Twentieth-Century Middle East, 3 cr.
ECON	511	Economic Development in Middle East Countries, 3 cr.
POLS	535	Middle East Politics, 3 cr.
ANTH/SOC	503	Middle Eastern Societies and Cultures, 3 cr.
MEST	570	Interdisciplinary Seminar, 3 cr. (to be taken in the candidate's final semester)

Four additional courses (with a maximum of two courses at the 400-level), from **Arabic Studies, Economics, History, Management, Political Science, and Anthropology/Sociology**. Selected or special topic courses in any department which have the Middle East as the central concern of the course will be accepted. Two courses are required of students with the thesis option. One course may be at the 400-level.

Thesis

Students opting to do a thesis must complete a thesis in accordance with university regulations. Before commencing work on the thesis, the student must have a thesis proposal approved by three faculty members, one of whom is on the Middle East Studies Interdisciplinary Committee.

Graduate Diploma

The diploma program in Middle East Studies is designed to fill the need for familiarity with modern Middle Eastern culture and society, particularly for students who have not been exposed to an intensive study of the Middle East at the undergraduate level.

Students are expected to finish the program in two semesters, though they may take up to four semesters to complete their requirements.

Admission

An applicant should have an undergraduate degree of high standing (a GPA of 3.0 or above). Prerequisites may be assigned depending on the applicant's academic background.

Language

To obtain the diploma each candidate must demonstrate, in addition to the normal university requirements in English, proficiency in classical Arabic up to the completion of ALNG 102.

Courses

Five courses are required for the Diploma, from at least three departments. Students can take a maximum of two courses at the 400 level. Students must take three of the following courses:

ARBS	451	Islamic Institutions
ARBS	543	Seminar on the Twentieth-Century Middle East
ECON	511	Economic Development in Middle East Countries
POLS	535	Middle East Politics
ANTH/SOC	503	Middle Eastern Societies and Cultures

The remaining two courses must be related to the Middle East, from Arabic Studies, Economics, History, Management, Political Science or Anthropology/Sociology.

Middle East Studies Courses (MEST)

430 Special Topics in Middle East Studies (3 cr.)

May be repeated for credit if content changes.

Selected topics to be investigated under the guidance of a faculty member, may be offered as a seminar.

570 Interdisciplinary Seminar (3 cr.)

Prerequisite: completion of 24 credit hours toward the degree or consent of program coordinator. Offered in spring.

The seminar treats contemporary problems of the Middle East and requires presentation of a substantial paper by each participant. Content changes each year. The seminar is intended to help students integrate the various disciplines that they have touched on in the program, and normally should be taken in the last spring semester of residence.

580 Selected Topics (3 cr.)

Offered only occasionally.

Problems discussed may vary depending on instructor and students needs. Course is offered only if participating departments do not offer an equivalent course. Focus will be announced prior to registration.

588 Comprehensives (no cr.)

Offered in fall and spring.

Individual consultation for students preparing for the comprehensive examination.

599 Thesis (no cr.)

Offered in fall and spring.

Operations Management

See Management

PHYSICS

Department of Physics
School of Sciences and Engineering

Professors: A. Abouelsaood, S. Arafa, F. Assabghy (Dean of SSE), M. Hammam, H. Omar (Chair)

Associate Professors: A. El Fiqi, A. Shaarawi

Assistant Professors: M. Chis, T. Hassanein, S. Sedky

Master of Science in Physics

The Master of Science program in physics provides, along with a deep and solid foundation in basic physics, theoretical and experimental skills that are transferable to many professions besides the traditional physics research careers. These skills, acquired within the main stream of study in theoretical and condensed matter physics, include mathematical modeling, instrumentation and experiment design, and general laboratory and research techniques.

A total of 32 credit hours is required for the Master of Science degree. This consists of 24 credit hours of courses and 8 credit hours of thesis work.

Admission

A Bachelor's degree in physics or a related field, with a minimum GPA of 3.0 out of 4.0, is required for admission into the physics master's program. Admission is also subject to the general university requirements for the graduate program. For those students whose grade records indicate promising ability, but who otherwise did not have an adequate preparation in physics, admission may be granted under the requirement that remedial courses will be taken.

Courses (24 credit hours)

The program of study is planned with the faculty advisor; and should include 6 credit hours of core courses, 12 credit hours chosen from the concentration courses, and 6 credit hours of physics electives.

Core Courses (6 credit hours)

PHYS	529	Computational Physics, 3 cr.
	550	Advanced Materials and Techniques, 3 cr.

Concentration Courses (12 credit hours)

To be chosen from the following courses, after consultation with advisor:

PHYS	503	Introduction to Solids, 3 cr.
	505	Mathematical Physics, 3 cr.

PHYS	511	Advanced Thermodynamics and Statistical Mechanics, 3 cr.
	513	Theory of Solids, 3 cr.
	521	Advanced Quantum Mechanics, 3 cr.
	522	Classical Electrodynamics, 3 cr.

Physics electives (6 credit hours)

To be chosen from the following courses:

PHYS	523	Electronic and Magnetic Properties of Solids, 3 cr.
	541	Quantum Many-body Theory, 3 cr.
	543	Diffraction methods in Materials Sciences, 3 cr.
	551	Advanced Topics in Solids, 3 cr.
	561	Independent Studies in Solids, 3 cr.

Thesis (8 credit hours)

Each student must submit a thesis topic that has been approved by a faculty supervisor, normally after acquiring 12 credit hours of course work. Since various research topics are addressed in a sequence of two seminar courses, the student must register for the first (PHYS 590) before submitting a thesis topic while the second (PHYS 591) must be taken during the execution of the thesis research. To ensure adequate faculty consultation, two semesters of the graduate thesis course (PHYS 599) are required.

PHYS	590	Graduate Seminar I, 1 cr.
	591	Graduate Seminar II, 1 cr.
	599	Research Guidance and Thesis, 3 cr. + 3 cr.

Graduate Diploma in Physics

The graduate diploma in physics is directed at providing the student with advanced background in areas such as computational physics, mathematical modeling, laboratory techniques, instrumentation, experiment design, and research techniques. A total of 18 credit hours (6 courses) is required for the diploma.

Admission

Admission requirements are the same as those for the M. Sc. program.

Courses (18 credits)

The courses may be selected from the 500-level physics courses. No more than two 400-level courses, not previously taken, may be considered for credit. Successfully completed 500-level courses in the diploma program will fulfill master's degree requirements should the student subsequently be admitted into the master's degree program. The diploma program may be completed in one academic year, and no thesis or qualifying examination is required.

Physics Courses (PHYS)

503 Introduction To Solids (3 cr.)

Prerequisite: PHYS 325 or equivalent. Offered in fall.

Classification of solids; preparation and characterization; binding energies; ionic, covalent and metallic bonds; crystallography; reciprocal lattice; Brillouin zones; vector representation; crystal symmetry and macroscopic properties; tensor formulation; diffraction in crystalline and amorphous solids; crystal imperfections; point-, linear-, and planar type; effects on properties; origin of microstructure in crystalline and amorphous solids.

505 Mathematical Physics (3 cr.)

Prerequisites: MATH 305 or equivalent. Offered in fall.

Vector analysis; coordinate systems; tensor analysis; determinants, matrices and group theory; infinite series, functions of a complex variable: conformal mapping and calculus of residues; partial differential equations of theoretical physics, non homogeneous equations-Green's function; Fourier and Laplace transforms; Gamma, Bessel and Legendre functions; integral equations; calculus of variations; numerical methods for data treatment. Linear and metric spaces. Hilbert spaces.

511 Advanced Thermodynamics and Statistical Mechanics (3 cr.)

Prerequisites: PHYS 311 or CHEM 400 or equivalent. Offered in spring.

The laws and applications of thermodynamics; Boltzmann transport equation and transport phenomena; classical statistical mechanics, canonical and grand canonical ensembles; quantum statistical mechanics; ideal Fermi and Bose gases; cluster expansions; phase transitions and critical phenomena.

513 Theory of Solids (3 cr.)

Prerequisite: PHYS 503. Offered in spring.

Semi-classical theory of electron dynamics; classification of solids; failures of the static lattice model; classical and quantum theories of harmonic crystal : phonons and lattice vibrations; thermal properties of insulators; defects, dislocations and thermodynamics stability; dielectric properties; phenomena in insulators: excitons, photoconductivity, light amplification, non-linear optics, luminescence.

521 Advanced Quantum Mechanics (3 cr.)

Prerequisite: PHYS 421 or equivalent. Offered in fall and spring.

Stationary and time-dependent perturbation theories; variational methods; collision theory: scattering and phase shifts; symmetry in quantum mechanical systems; permutational aspects of many particle systems; vector model and the aufbau principle of atoms and molecules; second quantization; relativistic theory of the electron.

522 Classical Electrodynamics (3 cr.)

Prerequisites: PHYS 316 and PHYS 505. Offered in spring.

Boundary value problems in electrostatics: Poisson and Laplace equations; Formal

solution of electrostatic boundary value problem with Green function; applications in rectangular, spherical and cylindrical coordinates. Multipoles, Electrostatics of macroscopic media, dielectrics and Magnetostatics. Time-varying fields, Maxwell equations, Conservation laws for macroscopic media. Magnetohydrodynamics and Plasma Physics. Relativistic formulation of electrodynamics. Lagrangian and Hamiltonian of a relativistic charged particle in external EM fields. Radiation by moving charges and radiation scattering. Lagrangian for the EM field. Invariant Green functions.

523 Electronic and Magnetic Properties of Solids (3 cr.)

Prerequisites : PHYS 503, PHYS 522 or concurrent. Offered in fall.

Quantization and energy barriers; central field problem; free electron models of solids; magnetic fields; optical phenomena: transmittance, reflectance, dielectric constant. Band structure of solid, semiconductors, non-stoichiometric solids, superconductivity, BCS theory, magnetic properties of solids, dia-, para- and ferromagnetism; magnetic susceptibility and magnetic resonance; interpretation of spectra and applications.

529 Computational Physics (3 cr.)

Prerequisites: MATH 233, MATH 304 or consent of instructor. Offered in fall.

Numerical methods for quadrature solution of integral and differential equations, and linear algebra. Use of computation and computer graphics to simulate the behavior of complex physical systems. Monte Carlo simulations.

541 Quantum Many-Body Theory (3 cr.)

Prerequisite: PHYS 521 and PHYS 522. Offered in fall.

Elements of non-relativistic quantum field theory: second quantization, fields, Green functions, the linked-cluster expansion, Dyson's equations. Development of Feynman diagrams and application to the degenerate electron gas and imperfect Fermi gas. Finite temperature Green's functions and applications.

543 Diffraction Methods in Materials Science (3 cr.)

Prerequisite: PHYS 503. Offered in spring.

Crystallography, reciprocal lattices, interference functions, Fourier methods, liquids, and amorphous solids; defects and thermal vibrations: perfect crystal theory, applications to X-ray, electrons and neutrons.

550 Advanced Materials and Techniques (3 cr.)

Prerequisites: PHYS 322L and PHYS 323L. Offered in spring.

An integrated laboratory course teaching students modern preparative solid state techniques (e.g. Sol-Gel method, Bridgman technique) and how to tailor the properties and performance of a material by modifications of its stoichiometry, the amount of doping, and the structural aspects. Students will prepare samples of materials with current interest (e.g. glasses, complex oxides, sinter ceramics, certain important single crystals, electronic materials, etc.). The structure, possible phase transitions, and their influence on materials properties are examined by advanced techniques

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(e.g. optical and electron microscopy, X-ray diffraction, TGA, DSC). The applicability of the materials for magnetic, electronic, and optical purposes will also be investigated. Emphasis is laid on studying new materials and on materials design for the environment.

551 Advanced Topics in Solids (3 cr.)

Prerequisite: Graduate standing and consent of instructor. May be taken for credit more than once if contents change. Offered in spring.

Topics to be chosen every year according to specific interest e.g. magnetic behavior of materials, optical spectroscopy, electronic solid state devices, amorphous solids, low temperature physics, physics of solar energy and photovoltaic devices, mechanical properties of solids, solid state reactions at higher temperatures, processes of preparing glasses and ceramic materials, physical phenomena of doping, transport phenomena in materials engineering: heat and mass transfer, overall energy, mass and momentum balances; physics of thin films.

561 Independent Studies (1-3 cr.)

Prerequisite: Consent of supervisor, graduate standing.

In exceptional circumstances, some senior graduates with departmental approval may arrange to study beyond the regular course offerings. Guided reading for research and discussions based on a subject of mutual interest to the student and the responsible faculty member. The student demonstrates his/her achievement by submitting a report and by passing a subsequent examination. Maximum of 3 credit hours of independent studies can be used towards the M. Sc. degree in physics.

590 Graduate Seminar I (1 cr.)

Offered in fall.

Seminars of research topics given by invited speakers. The student must register for this course prior to submitting a thesis topic.

591 Graduate Seminar II (1 cr.)

Prerequisite: PHYS 590. Offered in spring.

Presentations and discussions of results obtained by the graduate students during research work.

599 Research Guidance and Thesis (3 cr.)

Thesis consultation for qualified students. Two semesters are required, with credit being given each time.

POLITICAL SCIENCE

Department of Political Science
School of Humanities and Social Sciences

Professors: E. Hill, I. Ivekovic, W. Kazziha (Chair), B. Korany, E. Sullivan (Provost), D. Tschirgi, N. Farah, E. Montasser

Associate Professors: I. El Nur, E. Shahin, S. El-Musa

Assistant Professors: M. Kassem, V. Yadav, C. Davidson, M. Thakur, R. El Mahdi, M. Lattanzi, S. Khan, T. El Barghouti

Master of Arts in Political Science

The graduate program in Political Science offers advanced study in three specializations: Comparative Politics, International Relations, Professional Development, and courses in other areas of Political Science are offered from time to time as special topics electives when there is faculty and study interest. Graduate studies in Political Science at AUC is career oriented.

Comparative Politics

The strength of Comparative Politics at AUC is in the areas of Third World Politics and Development, with greatest faculty expertise being in the Middle East and Africa. Graduate studies in Comparative Politics seeks to increase students knowledge about the political dynamics of disparate systems within the larger contexts of state and society, political economy, interstate and regional relations. It seeks to develop skills of analysis and writing in order to enhance students' understanding of their region of interest and its relations with the world. Comparative Politics is particularly suitable for students who wish to pursue a career in academia, research, journalism, political consultancy, or similar positions in which a solid political background and analytical abilities are required.

International Relations

International Relations includes examination of current world politics as well as the many dimensions of the international system. Regional relations, foreign policies of selected states, and international law are included, as well as Middle Eastern and African international and interstate relations, and international political economy. The International Relations option seeks to provide greater depth of understanding of the forces operating in the international arena and the constraints that face foreign policy makers. Practice in analyzing current world and regional events and in the skills of written and oral presentation is provided in the student-run Model United Nations and Model Arab League simulations, extra curricular activities that are designed to give students the opportunity to put their academic learning into practice. International Relations is valuable for students who are working or seek to work in foreign relations, either in their own government or in international organizations. The field also prepares students for

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employment in other kinds of positions that require the ability to analyze and write about national or international politics.

Professional Development

Professional Development is designed for those who have an interest in studying the developing world. The program includes (but is not limited to) courses with practical components, and it requires an internship usually done in the summer between the first and second years. Professional Development seeks to prepare students to assume positions of greater responsibility in development agencies and organizations by expanding their understanding of the development field, its aims, objectives, methods of operation, and the broad scope of development work in the world today. It seeks to develop students' critical and analytical capacities, and provide practice in linguistic and writing skills needed for development work. Creativity in finding solutions to development problems is encouraged so that graduates may have an impact in their chosen areas of work in development. Practice in preparing project documents is included in the program. Professional Development is designed for those who are either presently working in development organizations or who are seeking to enter a development career.

The requirements for the specializations are as follows

All specializations have gateway courses that situate each specialization within its theoretical context and provide students with analytic tools for other courses. These introductory courses also prepare students for research and analysis needed for writing original seminar papers and for the thesis. In all specializations there are courses that include substantial components of theory and these must be well grounded theoretically.

Comparative Politics requires POLS 501, either POLS 502 or 530, choice of two from POLS 525, 535, 540, 545 or 570 (if designated by the Department as relating to a comparative politics topic), two special topics or research seminars approved by the Department, POLS 558, and two other courses, for a total of 27 credit hours.

International Relations requires POLS 503, International Relations Theory, in their first two semesters of graduate studies. This course is essential for further studies in international relations at the graduate level, for it introduces students to fundamental theoretical concepts and research skills. Students must also take 525 and either 551 or 571, plus six additional courses chosen in consultation with the graduate adviser, for a total of 27 credit hours.

Professional Development requires POLS 502, POLS 584, POLS 585-586 and five additional courses, for a total of 27 credit hours. The additional courses are to be drawn from the following areas, in consultation with the adviser for the Professional Development program: **International Aspects of Development** (POLS 525, POLS 562); **Comparative Politics** (POLS 530, POLS 535, POLS 540, POLS 545, POLS 551); **Public Policy and Development** (POLS 556, POLS 561). Up to two courses in **Public Administration** may also be taken as electives (PADM 514, PADM 517, PADM 518).

With department approval, up to six hours in disciplines other than political science may be counted toward degree requirements.

Thesis

A thesis, written in English and submitted in accordance with university regulations, is required of all specializations for the master's degree in Political Science. A detailed thesis prospectus must be submitted to the department for approval, at which time the student's thesis supervisor is formally designated. All Political Science graduate students must register for thesis supervision.

Students should familiarize themselves with procedures regarding committee selection, writing of the thesis, presentation to the supervisor and readers, and defense of the thesis. Complying with the procedural requirements within the specified time sequences is the responsibility of the student.

The thesis must be defended in an oral examination during which questions may be asked regarding any aspect of the thesis itself or of courses taken in the program, particularly as they may relate to the thesis.

Admission

The applicant for admission to the master's program should have an acceptable bachelor's degree in political science or in a closely related social science (preferably with a minor in political science), and an overall grade of *gayyid giddan* or a grade-point average of 3.0. Applicants with deficiencies in their preparation may be required to take appropriate courses at the undergraduate level.

LL.M. in International and Comparative Law

See Law

Graduate Diploma in Political Science

The Diploma in Political Science is designed as a one-year (two semesters) program for students from Egypt and abroad who wish to enhance their professional qualifications or pursue an academic interest in the field of politics. The Diploma Program requires the completion of any six courses chosen from the graduate offerings in Political Science, which include Middle East Politics, African Politics, International Relations, Development Studies, Political Economy, and Law.

Admission

Requirements for admission to the Diploma program are the same as those for admission to the graduate degree program of the department. Should a student in good standing decide during or after completion of the requirements for the Diploma that he/she wishes to work towards the MA degree he/she may apply to transfer to one of the degree specializations.

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Political Science Courses (POLS)

501 Comparative Theory (3 cr.)

Prerequisite: graduate standing.

An examination of the field of Comparative Politics and major relevant theories, approaches to research, and analysis. Required of all students in the Comparative Politics Specialization.

502 Scope and Method of Developmental Analysis (3 cr.)

Offered in fall and spring.

A critical review of the theories, models, and methodologies relevant to the study of political development, especially in the Third World.

503 International Relations Theory (3 cr.)

Prerequisite: consent of the instructor. Offered in fall.

Critical review of major theories and concepts in international relations, and the relevance of theory to contemporary world politics. Special attention will be given to the development of theoretical and research skills needed for the conducting of graduate research and the writing of graduate thesis.

507 Introduction to Forced Migration and Refugee Studies (3 cr.)

Same as SOC/ANTH 507. Prerequisite: Graduate standing or advanced undergraduate standing and permission of instructor. Offered in fall.

This course examines the changing political, social, and legal contexts within which people become forced migrants or refugees. Of particular concern are policies which generate, regulate, and protect the movement of forced migrants, the interaction between national governments and the United Nations High Commissioner for Refugees, the psychological aspect of refugee status, and the social and cultural organization of refugee and migrant communities, including notably gender aspects and the role of children. This course is required of all students seeking the diploma in Forced Migration and Refugee Studies.

509 The Political Economy of Europe (3 cr.)

The economy, society and state in contemporary Europe including public policies, socio-economic issues, state and society relations in European states and the European Union will be examined in relation to recent contexts and confrontations, together with the political and philosophical issues involved.

525 International Political Economy and Political Change (3 cr.)

Offered in fall.

Patterns of the evolution, organization and functioning of the global political economy including the role of states and other international actors; theory and practice of international regimes and global issues of the third millennium.

530 Comparative Political Development (3 cr.)

Offered in spring.

Survey of the context and content of the developmental process in selected areas or

in countries outside the Middle East.

535 Middle East Politics (3 cr.)

Offered in spring.

Strategies, problems, and outcomes of the developmental process in the Middle East.

536 Contemporary Issues in Political Islam (3 cr.)

This course is designed to examine current intellectual, economic, political, and foreign policy issues in political Islam. Among the topics that will be analyzed are political Islam and the challenges modernity; secularism; the Islamic state; democracy and pluralism; human rights; women; Islamic economic system; and globalization.

540 Politics of Modern Egypt (3 cr.)

Offered in fall.

Survey of political development in Egypt with special attention to contemporary plans, problems, and prospects.

544 Politics and the Government of Europe (3 cr.)

Considers the governance structures, processes, and patterns of politics in major states, institutions of the EU, and international organizations.

545 Politics and Development in Sub-Saharan Africa (3 cr.)

Prerequisite: consent of the instructor. Offered in fall.

Domestic and international contexts within which development occurs: ethnicity, class, gender, dependence; central institutions involved in decision making (the state, international donors, international financial institutions); contemporary policy sectors such as rural development, industry, health, etc.

551 African International Relations (3 cr.)

Prerequisite: consent of the instructor. Offered in spring.

Political and economic dimensions of African international relations, particularly as they relate to development. Analysis of state actors, regional and international organizations, multi-nationals, and liberation movements and their relationships. Intra-African and foreign relations of African states.

554 Comparative Foreign Policy: Theories and Applications (3 cr.)

Prerequisite: Consent of the instructor.

Patterns of the international system are greatly shaped by the strategies, objectives, and decisions of states, i.e. their foreign policies. Consequently, this course deals with the sources, processes and outcomes of these policies and how far they shape the global arena.

555 Strategic Theory (3 cr.)

Prerequisite: consent of instructor. Offered in fall.

This course will focus on theories of statecraft especially those in which force and/or the threat of force is an important element; special attention will be given to such classical theorists as Sun Tzu and Clausewitz as well as contemporary writers.

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556 Public Policy Theory (3 cr.)

Prerequisite: consent of instructor. Offered in fall.

Public policy-making in different systems using various theories and approaches related to policy analysis; case studies of policy-making in different areas and particular contexts.

558 Comparative Politics and the Middle East (3 cr.)

Prerequisites: POLS 501 or 502 and 535 or 540.

Polity, economy, and society considered as interconnected areas for research in comparative politics; the impasse debate about theory in Middle East politics explored in relation to comparative work on other areas and analysis of representative studies; consideration of materials relevant for studying the Middle East; practice in formulating a research proposal and in developing an agenda for research.

561 Public Policy and Development (3 cr.)

Prerequisites: ECON 201 and POLS 535 or 502.

Public policy-making considered within contexts of current policy debates. Historical perspectives emphasized, as well as the effects of the globalization of trade, rise of multinationals, and the parameters of effective policy making at national and sub-national levels.

562 International Development Organizations (3 cr.)

Prerequisite: POLS 502.

The structure of international aid and assistance, with emphasis on analyzing the activities of multilateral, and bilateral organizations and NGOs which attempt to promote development. Emphasis will be on the political and bureaucratic environments in which these organizations operate.

570 Special Topics in Political Science (3 cr.)

Offered in fall and spring.

Alternating selected Topics to be investigated and reported. May be taken more than once if content changes.

571 Seminar: Special Topics in International Relations (3 cr.)

Issues in international relations regionally or topically defined. Each student will investigate an aspect of the topic as defined, researching it and reporting on it within the seminar context. May be taken more than once if content changes.

573 Special Topics in Public Law (3 cr.)

Same as POLS 473. Prerequisite: Consent of the instructor.

Topics drawn from constitutional and administrative law, including related jurisprudence and judicial institutions. May be taken a second time for credit if content changes.

574 Special Topics in Public International Law (3 cr.)

Same as POLS 474. Prerequisite: POLS 412 or consent of instructor.

Specialized areas of International Law, such as Human Rights and Humanitarian Law. May be taken a second time for credit if content changes.

576 Issues in Forced Migration (3 cr.)

Same as SOC/ANTH 576. Prerequisite: Graduate standing, or advanced undergraduate standing and permission of the instructor.

This course complements other courses offered in the postgraduate Diploma in Forced Migration and Refugee Studies during any given semester by examining critical issues that would otherwise remain unexamined. Topics may include, among others, resettlement, social service delivery, urban refugees, women, health, children, family reunification, humanitarian intervention. May be taken more than once if content changes. This course is required of all students seeking the diploma in Forced Migration and Refugee Studies.

580 Independent Study and Readings (3 cr.)

Prerequisite: Department approval. Offered in fall and spring.

Guided individual readings and/or research on a subject of mutual interest to student and faculty member. May be taken only once.

584 Practicum: Internship or Research (3 cr.)

Prerequisites: At least eighteen hours of master's degree work, or adviser's permission.

Internship for four to six months in an organization pursuing development activities, or active involvement on an institutional research project having a development emphasis. The work is assessed on the basis of a written report and discussion.

585-586 Project Seminar (6 cr.)

This is a special seminar for the practical development specialization. It includes the examination, specification and identification of problem areas; conceptualization and design of programs and their implementation; evaluation of project proposals and implementation. Different methods of identifying, designing and evaluating projects will be critically examined. Attention will also be given to methodologies incorporating self-reliance and participation. Students will be assessed by a variety of practical exercises, essays and research projects. This is a two semester seminar running from September to June of each year.

599 Research Guidance and Thesis (no cr.)

Public Administration (MPA)

MPA- See Management

SOCIOLOGY-ANTHROPOLOGY

Department of Sociology, Anthropology, Psychology, and Egyptology
School of Humanities and Social Sciences

Professor Emeritus: M. Kennedy

Professors: S. Altorki, D. Cole, K. Dwyer, N. S. Hopkins, S. Ibrahim, C. Nelson

Associate Professors: M. Abaza, N. Nosseir

Assistant Professors: M. Abdelrahman, C. Haines, H. Rizzo

Master of Arts

The program emphasizes the interdisciplinary role of sociology and anthropology in theoretical and applied research on issues of development and social change in the Middle East and Africa. The program concentrates on gender and religion, social organization, symbolism, theory and methodology, and Arab world studies.

Admission

The applicant for this program should be a graduate of high standing from an undergraduate program in any of the human sciences. Those who lack this background but who are exceptionally well qualified in other respects may be admitted provisionally. In such cases the department may prescribe a noncredit program of work in theory or method for one or two semesters to correct deficiencies. Students should normally start the graduate course sequence in the fall.

Language

The candidate for the degree must demonstrate proficiency in a language other than English. The language exam is normally taken in Arabic and, in the case of native speakers, is intended to ensure that the student can work as a professional in that language. In some cases a student may offer French, German, or another major language.

Courses

Eight courses (24 credits) are required. All students must take: SOC/ANTH 500 Social Thought, and either SOC/ANTH 505 Ethnographic Fieldwork or SOC/ANTH 506 Survey Research. The remaining six courses should be chosen from the list of electives, each of which is offered in principle at least once in a two-year period. A maximum of six hours of 400-level courses in sociology and anthropology or of 500-level courses in other disciplines (including SOC-ANTH-POLS 507 and 576 when taught by faculty outside the SOC-ANTH program) may be taken with departmental approval.

Comprehensive Examination

The written exam covers the theory and methodology of both sociology and anthropology and a field of specialization related to the student's program of coursework. The exam may not be taken more than twice. An oral examination will be given immediately

following the written test if further evidence of the candidate's knowledge is deemed necessary by the department.

Thesis

All students must complete a research or library thesis in accordance with university regulations. Before commencing work on the thesis, the student must have a thesis proposal approved by three faculty members.

Sociology-Anthropology Courses (SOC/ANTH)

500 Social Thought (3 cr.)

Offered in fall.

An in-depth examination of sociological and anthropological theories of culture and society.

502 Structure and Process in Egyptian Society (3 cr.)

Offered in fall.

Emphasis on those forces which have given Egyptian society cohesion and continuity in a rapidly changing world. Crucial issues confronting social scientists and planners.

503 Middle Eastern Societies and Cultures (3 cr.)

Offered in spring.

A survey of the present state of knowledge concerning Middle Eastern societies, with an emphasis on the disciplinary approaches of sociology and anthropology.

505 Ethnographic Fieldwork (3 cr.)

Offered in alternate years.

Techniques of participant observation, non-participant observation, and in-depth interviewing used in anthropology and ethnomethodology. Issues include problems of access, grounded theory and ethical issues. Students will normally carry out a field-work project for the course.

506 Survey Research (3 cr.)

Offered in alternate years.

Techniques and issues in survey research. Sampling, operationalization, questionnaire design, survey application and analysis of survey data. The course is designed to give students hands-on experience in every aspect of survey research.

507 Introduction to Forced Migration and Refugee Studies (3 cr.)

Same as POLS 507. Prerequisite: Graduate standing or advanced undergraduate standing and permission of instructor. Offered in fall.

This course examines the changing political, social, and legal contexts within which people become forced migrants or refugees. Of particular concern are policies which generate, regulate, and protect the movement of forced migrants, the interaction between national governments and the United Nations High Commissioner for

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Refugees, the psychological aspect of refugee status, and the social and cultural organization of refugee and migrant communities, including notably gender aspects and the role of children. This course is required of all students seeking the diploma in Forced Migration and Refugee Studies.

510 Problems in Sociology-Anthropology (3 cr.)

Offered occasionally.

Problems discussed may vary depending on the instructor and the needs of the students. Focus of the class will be announced prior to registration. Course may be repeated for credit if content changes.

515 Kin, Friends and Neighbors (3 cr.)

Offered in alternate years.

Principles underlying group formation at the local level, such as kinship, residence, and friendship and the resultant web of collective and dyadic relations; special emphasis on the articulation of these groups with class, occupational and ethnic groups, and the state.

520 Sex Roles, Gender and Society (3 cr.)

Offered in alternate years.

How sex roles and gender are socially constructed in cross-cultural perspectives: special emphasis on the impact of social-cultural change on gender relations.

525 Religion, Ideology and Society (3 cr.)

Offered in alternate years.

The relation of ideology and world religions to social action; special emphasis on the integrative aspects of both on society as well as their potential for change and transformation.

530 Stratification and the State (3 cr.)

Offered in alternate years.

Social differentiation, inequality, and state institutions in a variety of political and authority systems. The relationship of state and society.

535 World Systems and Development (3 cr.)

Offered in alternate years.

Theories of the growth of the new international division of labor and its relationship to socioeconomic change in both developed and developing societies.

540 Agrarian and Pastoral Transformation (3 cr.)

Offered in alternate years.

Development in rural communities based on agriculture and/or pastoralism, including the changing relationship that exists between them and the wider societies of which they are parts.

545 Cities: Structure and Dynamics (3 cr.)

Offered in alternate years.

The structure of urban forms, patterns of city life, and the relationship of cities to the wider societies of which they are part.

550 Sociology of Knowledge (3 cr.)

Offered in alternate years.

The epistemological foundations and social framework of knowledge; what is involved in "having knowledge" about society.

555 Comparative Health and Healing Systems (3 cr.)

Offered in alternate years.

Cross-cultural and multidisciplinary approach to the crucial issues which link the social sciences to health and healing systems. Special emphasis on issues of health and healing under conditions of social and cultural change; development and policy in the Middle East.

560 Population Dynamics (3 cr.)

Offered in alternate years.

A consideration of the causes and consequence of the growth and decline of population through the analysis of fertility, mortality, and migration. Issues and research related to rapid population growth and labor migration will be emphasized.

565 Ethnicity, Identity and Nationalism (3 cr.)

Offered in alternate years.

This course examines the factors that contribute to modern nationalism or contradict it. Such factors include ethnic and other forms of identity such as those constructed around the notions of race, language, and religion. The approach to the imagined community is both cultural, dealing with identity formation and maintenance, and social, stressing processes and social groups.

570 Environment and Society (3 cr.)

Offered in alternate years.

This course uses a broad interdisciplinary approach to analyze the relationship between development and environmental degradation, the ways in which development enhances protection, and the issues of sustainable development. It covers the social movements that may emerge around the environmental concerns, and the social processes that lead to environmental risks.

575 Modern Social Movements (3 cr.)

Offered in alternate years.

The emergence of modern social movements based on such issues as gender, ecology, race, ethnicity, community control, and identity. The relation between "new" social movements and earlier social movements based on class, national liberation, and revolutionary transformation, with comparison between First and Third World movements.

576 Issues in Forced Migration (3 cr.)

Same as POLS 576. Prerequisite: Graduate standing, or advanced undergraduate standing and permission of the instructor.

This course complements other courses offered in the postgraduate Diploma in Forced Migration and Refugee Studies during any given semester by examining critical issues that

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would otherwise remain unexamined. Topics may include, among others, resettlement, social service delivery, urban refugees, women, health, children, family reunification, humanitarian intervention. May be taken more than once if content changes. This course is required of all students seeking the diploma in Forced Migration and Refugee Studies.

584 Practicum: Internship or Research (3 cr.)

Prerequisite: Permission of adviser.

Internship for four to six months in an organization working with forced migrants or active involvement on an institutional research project that examines some element of forced migration. The work is assessed on the basis of a written report and discussions with faculty advisor.

588 Comprehensives (no cr.)

Offered in fall and spring.

Individual consultation for students preparing for the comprehensive examination.

591 Guided Research (1-3 cr.)

Fieldwork under the supervision of the Social Research Center or a member of the departmental staff.

599 Research Guidance and Thesis (no cr.)

Offered in fall and spring.

Consultation for students in problems related to their theses.



TEACHING ARABIC AS A FOREIGN LANGUAGE

Arabic Language Institute
School of Humanities and Social Sciences

Professor: El S. Badawi (Director, Arabic Language Institute)

Professor: A. El Gibali

Interest in the Arabic language has increased greatly throughout the world. With this has come a demand for professionals trained in the field. Based on modern theory and practice, the master's degree and the diploma programs in Teaching Arabic as a Foreign Language (TAFL) are especially designed to meet this need.

Master of Arts

The master's degree requires two years' residence and covers the following areas: linguistics, contrastive analysis in second-language teaching and learning, and methods of teaching foreign languages. In addition, practice teaching is required. The courses have been structured to promote research as well as to develop highly trained teachers. In addition, a number of issues related to the role of Arabic in modern society are freshly examined, such as current methods of teaching Arabic to children, reform of the writing system, grammar reform movements, and the problem of diglossia. The TAFL program seeks to inspire new approaches to these problems.

Admission

Applicants for the master of arts degree in TAFL should hold a bachelor of arts degree specializing in Arabic language, Islamic studies, Middle East area studies, or a modern language. Applicants should also meet general university admission requirements. Applicants with undergraduate specialization in a modern language other than Arabic must take a number of additional courses in the field of Arabic studies. Applicants for the master of arts degree in TAFL should have teaching experience prior to admission into the program or must acquire this experience concurrently with the program.

Language

Non-native speakers of Arabic and holders of degrees other than Arabic language or Islamic studies must demonstrate in an examination that their proficiency in Arabic is adequate for study in the program. The level of language proficiency required for admission is not less than the level Superior as specified by the guidelines of the American Council for the Teaching of Foreign Languages (ACTFL). Those with less but showing exceptional promise may be recommended for AUC preparatory training for a period not to exceed one year.

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An applicant who is not a native speaker of English must have sufficient command of English to qualify for admission as an AUC graduate student. Those with less but showing exceptional promise may be recommended for AUC preparatory training for a period not to exceed one year.

Courses

A minimum of 30 graduate credit hours and a thesis are required except as indicated in the "Thesis" section below. Required of all students:

TAFL	501	Principles of Linguistic Analysis, 3 cr.
	503	Second language Acquisition, 3 cr.
	510	Methods of Teaching a Foreign Language I, 3 cr.
	511	Methods of Teaching a Foreign Language II, 3 cr.
	515	The Phonetics of Arabic, 3 cr.
	520	Research Methods in Applied Linguistics, 3 cr.

Electives should complete the required number of credit hours. Choice will depend upon the thesis topic and the student's undergraduate field of study and must be approved by the adviser. While they are normally selected from among 500-level TAFL courses, with the adviser's approval, electives may include up to two non-TAFL courses. No more than two 400-level courses may be counted toward the degree.

Comprehensive Examination

The comprehensive examination consists of a written examination followed by an oral examination. It is required only of students not writing theses and may not be taken more than twice.

Thesis

The thesis is usually required for graduation. In some circumstances and with the adviser's approval, a candidate may be allowed to replace the thesis with two additional courses, increasing the total number of minimum credit hours required from 30 to 36. In such cases the candidate would be required to take the comprehensive examination.

The student writing a thesis must produce a professional paper on some aspect of TAFL. The thesis must be prepared under the guidance and close supervision of a faculty adviser and a designated committee.

Graduate Diploma in TAFL

The diploma program in TAFL is designed for qualified teachers of Arabic who meet the same admission requirements as those for the masters degree. The diploma is awarded to those who successfully complete the following six TAFL courses:

TAFL	502	Assessment in Language Learning, 3 cr.
	506	Resources for TAFL, 3 cr.

TAFL 510	Methods of Teaching a Foreign Language, 3 cr.
516	The Linguistics of Arabic, 3 cr.
565	Observation and Evaluation of Language Teaching, 3 cr.

One three-hour elective course to be decided upon by the student in consultation with the academic adviser.

A maximum of one appropriate course may be accepted, with departmental approval, as transfer credit toward the diploma in lieu of 502, 510, 516, 565, or an acceptable elective.

TAFL Courses

501 Principles of Linguistic Analysis (3 cr.)

Same as TEFL 501. Offered in fall.

Concepts fundamental to linguistic analysis in the areas of syntax, semantics, phonology, historical linguistics, sociolinguistics, and language acquisition.

502 Assessment in Language Learning (3 cr.)

Same as TEFL 502. Offered in fall.

A practical course that will enable the student to develop valid and reliable assessment procedures, analyze results, and evaluate the procedures.

503 Second Language Acquisition (3 cr.)

Same as TEFL 503. Prerequisite: TAFL/TEFL 501 or permission of the department. Recommended prerequisite: TAFL/TEFL 520. Offered in fall and spring.

Relationship between first and second language acquisition. Aspects of acquisition from a psycholinguistic perspective. Cognitive, linguistic, personality and classroom factors influencing SLA. Applications for teaching.

506 Resources for Teaching Arabic as a Foreign Language (3 cr.)

Offered occasionally.

Evaluation, adaptation, and integration of instructional media used in learning and teaching Arabic as a foreign language: textbooks, audio and audio-visual materials and computer-assisted language learning materials.

507 Computer Assisted Language Learning (CALL)/Computer Operations Techniques (3 cr.)

Prerequisite: TAFL 510. Offered once a year.

Description, analysis and evaluation of CALL software. Integration of CALL into AFL learning. Guided practical experience in producing AFL software using authoring programs. Using the Internet as a resource for learning AFL.

510 Methods of Teaching a Foreign Language I (3 cr.)

Same as TEFL 510. Offered consecutively with TAFL 511.

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Survey of learning theories, individual learning styles and strategies as they relate to the teaching and learning processes. Examination and critical analysis of major approaches and methods of teaching foreign languages. The course includes classroom observations and limited practice teaching.

511 Methods of Teaching a Foreign Language II (3 cr.)

Prerequisite: TAFL 510. Offered consecutively with TAFL 510.

Survey of approaches to the design and implementation of foreign language curricula and teaching materials and teaching practicum. The practicum includes foreign language classroom observations, supervised practice teaching, and materials development, selection, and adaptation.

515 The Phonetics of Arabic (3 cr.)

Offered in the fall.

Phonetics of Arabic as it is spoken at various levels in Egypt, studied in light of modern phonetic theory. Reference is made to the phonetics of both Egyptian colloquial Arabic and the Arabic of the early Islamic era as described by the early Arab phoneticians. Taught in Arabic and/or English.

516 The Linguistics of Arabic (3 cr.)

Offered in alternate years.

Development of Arab linguistic theory with treatment of certain linguistic topics. Attention to the various schools of thought among Arab philologists in the light of modern linguistic theory. Taught in Arabic and/or English.

520 Research Methods in Applied Linguistics (3 cr.)

Same as TEFL 520.

Provides TEFL/TAFL MA candidates with the knowledge and skills to read and understand various types of research in applied linguistics, to have a basic grasp of the issues currently being studied in the field, and be able to critically distinguish between good and poor research. Ability to write in appropriate technical fashion is emphasized.

525 Contrastive Analysis in Second-Language Teaching/Learning (3 cr.)

Same as TEFL 525. Prerequisite: TAFL 501. Offered once a year.

Contrastive analysis and error analysis: models and theoretical underpinnings. Contrastive analysis beyond the sentence level. Discourse functions starting with sentence function perspective and including speech acts and discourse organization (spoken and written). Implications for foreign-language teaching/learning.

540 Selected Topics in Applied Linguistics (1, 2, or 3 cr.)

Same as TEFL 540.

Special topics and current issues in linguistics and language teaching with special reference to Arabic. May be taken more than once if content changes.

550 Language Pragmatics (3 cr.)

Same as TEFL 550. Prerequisite: TAFL 501. Offered once a year.

Definition of pragmatics. Relations of pragmatics to semantics, syntax and sociolinguistics. Speech act theory. Directness and indirectness. The cooperative Principle, principles of politeness, Relevance Theory. Cross-linguistics/cultural application. Relevance to language teaching.

551 Advanced Arabic Grammar (3 cr.)

Offered in fall and spring.

An examination of the basic concepts in traditional Arabic grammar using modern linguistic theories with the aim of suggesting alternative methods of analysis and formalization. Taught in Arabic.

553 Sociolinguistics (3 cr.)

Same as TEFL 553. Offered once a year.

The effect of social phenomena on linguistic form. Languages, dialects, and speech communities. Multilingual societies, diglossia, code choice. Regional, social and linguistic variation. Terms of address. Language attitudes. Language and ethnicity. Language maintenance and shift. Language and gender. Language planning and standardization. Sociolinguistic aspects of education.

555 Research Seminar (3 cr.)

Offered in alternate years.

Special topics and current issues in Arabic linguistic theories and language teaching. May be taken a second time if content changes.

560 Supervised Study in TAFL (3 cr.)

Prerequisite: consent of instructor. Offered in fall and spring.

Individual research on specific area of interest to the student. May be taken a second time if content changes.

565 Observation and Evaluation of Language Teaching (3 cr.)

Prerequisites: TAFL 510-511. Offered in alternate years.

Principles of observation and evaluation. Analysis of various teaching methods with emphasis on actual classroom observation and evaluation.

588 Comprehensives (no cr.)

Offered occasionally.

Individual consultation for students preparing for the comprehensive examination.

599 Research Guidance and Thesis (no cr.)

Offered in fall and spring.

Consultation for students on matters related to their thesis.

TEACHING ENGLISH AS A FOREIGN LANGUAGE

English Language Institute
School of Humanities and Social Sciences

Professor Emeritus: S. El Araby

Professor: Y. El Ezabi (Director, ELI)

Associate Professors: F. Perry, P. Stevens

Assistant Professors: P. Wachols, R. Williams

The graduate programs in Teaching English as a Foreign Language (TEFL) are designed to enhance knowledge, skills, and effectiveness of teachers, researchers, and administrators in the profession. These programs attract an international student body and combine rigorous academic standards with an appropriate balance between theory and practice.

Admission

Applicants for the Master of Arts degree in TEFL must have teaching experience prior to admission into the program, or may acquire this experience concurrent with the program.

Language

Applicants who are not native speakers of English will be required to demonstrate on the ELPET (AUC English Language Proficiency Entrance Test) or TOEFL with TWE that their command of English is adequate for study in the program.

Master of Arts

Courses

Required of all students:

TEFL 500	English Grammar, 3 cr.
501	Principles of Linguistic Analysis, 3 cr.
502	Assessment in Language learning, 3 cr.
503	Second Language Acquisition, 3 cr.
510	Methods of Teaching a Foreign Language I, 3 cr.
511	Methods of Teaching a Foreign Language II, 3 cr.
520	Research Methods in Applied Linguistics, 3 cr.

For thesis writers, a minimum of 33 graduate hours plus the thesis is required. In addition to the required courses, 570 (Advanced Research Methodology) is required of those writing theses. For non-thesis writers, a minimum of 36 graduate hours is required plus a comprehensive examination.

In choosing electives, students in the comprehensives track, with assistance of their advisors, are to choose at least one course from each of the groups listed below.

In choosing electives, students in the thesis track, with assistance of their academic advisors, are to choose at least one course from at least two of the groups listed below.

1. Education and research: TEFL 507, 540, 570 (for students in the comprehensives track)
2. Linguistics: TEFL 505, 521, 540, 550
3. Cross-linguistic, cross-cultural studies: TEFL 525, 540, 550, 553

In the case of TEFL 540 Selected Topics in Applied Linguistics, the course topic must relate to the general category.

Comprehensive Examination

The Comprehensive Examination consists of a written examination followed by an oral examination. It is required only of students not writing theses, and may not be taken more than twice.

Thesis

The thesis as a requirement for graduation is optional. The student who chooses to write a thesis must produce a professional paper on some aspect of TEFL/applied linguistics. The thesis must be prepared under the guidance and close supervision of a faculty adviser and a designated committee, and must be defended to the satisfaction of the department.

Graduate Diploma in TEFL

The Diploma program is designed for qualified teachers of English who meet the same admission requirements as those for the Master of Arts degree. The Diploma is awarded to those who successfully complete the following six TEFL courses:

500	English Grammar, 3 cr.
501	Principles of Linguistic Analysis, 3 cr.
503	Second Language Acquisition, 3 cr.
510	Methods of Teaching a Foreign Language I, 3 cr.
511	Methods of Teaching a Foreign Language II, 3 cr.
One three-hour additional course to be decided upon by the student in consultation with the academic adviser	

A maximum of one appropriate course may be accepted, with departmental approval, as transfer credit toward the Diploma in lieu of TEFL 501, 503, 510, 511, or an acceptable elective.

TEFL Courses

500 English Grammar (3 cr.)

A descriptive overview of the structure of English. Detailed analysis of the major grammatical constructions. Implications for language teaching and learning.

501 Principles of Linguistic Analysis (3 cr.)

Same as TAFL 501.

Concepts fundamental to linguistic analysis in the areas of syntax, semantics, phonology, historical linguistics, sociolinguistics, and language acquisition.

502 Assessment in Language Learning (3 cr.)

Same as TAFL 502.

A practical course that will enable the student to develop valid and reliable assessment procedures, analyze results, and evaluate the procedures.

503 Second Language Acquisition (3 cr.)

Same as TAFL 503. Prerequisite: TEFL/TAFL 501 or permission of the department.

Recommended prerequisite: TEFL/TAFL 520.

Relationship between first and second language acquisition. Aspects of acquisition from a psycholinguistic perspective. Cognitive, linguistic, personality and classroom factors influencing SLA. Implications for teaching.

505 History of the English Language (3 cr.)

The phonological, morphological, syntactic, lexical, and graphemic development of the English language from the Old English period to the present.

507 Computer Assisted Language Learning (CALL) (3 cr.)

Prerequisite: TEFL 510.

Description, analysis and evaluation of CALL software. Integration of CALL into EFL syllabus. Guided practical experience in producing EFL software using authoring programs. Using the Internet as a resource for teaching and learning EFL.

510 Methods of Teaching a Foreign Language I (3 cr.)

Same as TAFL 510.

Survey of learning theories, individual learning styles and strategies as they relate to the teaching and learning processes. Examination and critical analysis of major approaches and methods of teaching foreign languages. The course includes classroom observations and limited practice teaching.

511 Methods of Teaching a Foreign Language II (3 cr.)

Prerequisite: TEFL 510.

Survey of approaches to the design and implementation of foreign language curricula and teaching materials and teaching practicum. The practicum includes foreign language classroom observations, supervised practice teaching, and materials development, selection, and adaptation.

520 Research Methods in Applied Linguistics (3 cr.)

Same as TAFL 520.

Provides TEFL/TAFL MA candidates with the knowledge and skills to read and understand various types of research in applied linguistics, to have a basic grasp of the issues currently being studied in the field, and be able to critically distinguish between good and poor research. Ability to write in appropriate technical fashion is emphasized.

521 English Syntax (3 cr.)

Prerequisite: TEFL 501.

A study of contemporary syntactic theories of generative grammar with particular reference to the choice of formalism, universal grammar and the claims they make about the nature of language, linguistic descriptions and implications for language teaching.

525 Language Transfer, Contrastive Analysis, and Error Analysis (3 cr.)

Same as TAFL 525. Prerequisite: TEFL 501.

The study of language contact and language transfer phenomena. Contrastive analysis and error analysis within and beyond the sentence level. Models, procedures and theoretical underpinnings. Discourse function and organization. Implications for second/foreign language teaching and learning.

530 Supervised Study in TEFL (3 cr.)

Prerequisite: consent of instructor.

Individual research on a specific area of interest to the student in consultation with the instructor. May be taken a second time if content changes.

540 Selected Topics in Applied Linguistics (1, 2, or 3 cr.)

Same as TAFL 540.

Special topics and current issues in linguistics and language teaching. May be taken more than once if content changes.

550 Language Pragmatics (3 cr.)

Same as TAFL 550. Prerequisite: TEFL 501.

Definition of pragmatics. Relation of pragmatics to semantics, syntax and sociolinguistics. Speech act theory. Directness and indirectness. The Cooperative Principle, principles of politeness, Relevance Theory. Cross-linguistic/cultural application. Relevance to language teaching.

553 Sociolinguistics (3 cr.)

Same as TAFL 553.

The effect of social phenomena on linguistic form. Languages, dialects, and speech communities. Multilingual societies, diglossia, code choice. Regional, social, and linguistic variation. Terms of address. Language attitudes. Language and ethnicity. Language maintenance and shift. Language and gender. Language planning and standardization. Sociolinguistic aspects of education.

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570 Advanced Research Methodology (3 cr.)

Prerequisite: TEFL 520.

A seminar specially designed for thesis track candidates and others who wish to pursue research in TEFL. Students will explore their specific research interests and are expected to share their ideas and constructive criticism with other members of the class. The aim of this course is to guide the student towards the production of a proposal for a possible thesis or future research.

588 Comprehensives (no cr.)

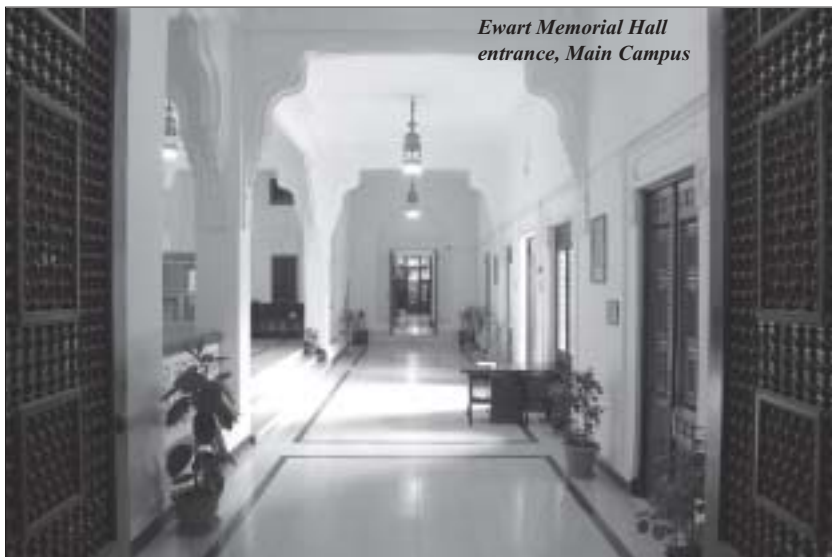
Consultation for students preparing for the comprehensive examination.

599 Research Guidance and Thesis (no cr.)

Consultation for individual students on matters related to their theses.

Television Journalism

Graduate Diploma - See Journalism and Mass Communication



LANGUAGE INSTITUTES

In addition to the degree programs and courses just described, the academic units of the School of Humanities and Social Sciences offer Arabic and English language programs. Two programs offered through the Arabic Language Institute provide intensive Arabic language instruction for non-Arabic speakers. The English Language Institute provides instruction for students who have been admitted into a degree program but who require further work to achieve the required level of English language proficiency.

Arabic Language Institute

School of Humanities and Social Sciences

Professor: El S. Badawi (Director, Arabic Language Institute)

Professor: A. El-Gibali

Arabic Language Teachers: M. K. Abdel Salam, N. Abdel Wahab, D. Abo El-Seoud, J. Allam, N. El Assiouti, Sh. Attalla, M. Attia, R. El-Essawi, Sh. El-Ezabi, N. Harb, M. Hassan, A. Hassanein, Z. Ibrahim, N. Korica (Coordinator, Arabic Language Unit), S. Massoud, M. S. Moussa (Coordinator, Arabic Language Credit Courses), I. Saad, H. Salem, L. Al-Sawi, S. Serry, Z. Taha (Executive Director, Center for Arabic Study Abroad), A. El-Tonsi, A. Wakid, N. Warraki (Director, Arabic Language Unit), L. White and Sh. Yacout

The Arabic Language Institute is responsible for Arabic language instruction within the university's academic structure. It includes the university's TAFL (Teaching Arabic as a Foreign Language) M.A. program as well as regular non-intensive and accelerated courses in Arabic offered for academic credit. See course listings in the undergraduate section of the catalog.

The Arabic Language Institute also administers two programs of intensive study of Arabic: the intensive Arabic and the Center for Arabic Study Abroad (CASA) programs. These programs award program (but not academic) credit toward a degree at AUC. Students, however, may be able to obtain credit toward an academic degree at their home institution for their Intensive Arabic Language (ALIN) coursework. They should, however, determine their institution's policy regarding transfer credit before coming to Cairo.

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Intensive Arabic

The Arabic Language Institute offers intensive Arabic language courses for students, business people, diplomats, scholars, and others needing to gain a broad command of contemporary Arabic as quickly and as effectively as possible. For over sixty years, first through its School of Oriental Studies and then through its Center for Arabic Studies, AUC has taught Arabic to foreigners. Since the inception of what is now the Arabic Language Institute in the 1970s, this program has attracted students from the United States, Africa, Asia and Europe, offering intensive courses in both modern standard and Egyptian colloquial Arabic. A summer program is also offered.

Intensive Arabic Language courses (ALIN) are part of the Arabic Language Institute's program. Students must register for a minimum of twelve program credit hours per semester. All courses are taken for grades, and program credit is awarded as indicated at the end of each course listing. Students may receive up to nine undergraduate credits from AUC by petitioning the director of the program. (See "Non-degree Academic Regulations" for transfers of credit to other universities.)

Elementary Level

The course for beginners runs from the first week of September through May. The main emphasis is on modern standard Arabic, but Egyptian colloquial Arabic is simultaneously offered (about thirty percent of class time is devoted to colloquial). Arabic is used as the main medium of instruction in the second half of the program. The course comprises up to twenty hours per week of classroom instruction, including language laboratory work, and up to twenty hours of home assignments.

A student who successfully completes the first year of intensive study with the Arabic Language Institute can expect to possess a working competence in reading and writing modern standard Arabic and understanding and speaking Egyptian colloquial or modern standard Arabic.

Intermediate Level

Courses at this level are designed for those who have completed a year of intensive study at the elementary level of the Arabic Language Institute or who have studied two or more years elsewhere and can demonstrate a similar level of competence. The program runs from the first week of September to the end of May in the following year.

Arabic is the chief medium of instruction. Students continue work in modern standard Arabic and Egyptian colloquial Arabic. Interested students may, at this level, begin to acquire familiarity with classical Arabic. Attention is given to the Arabic of print and broadcast media, while special lecture courses in Arabic are offered in response to the special interests of the students, such as Middle Eastern economics and politics, business correspondence, medieval and modern Arabic literature.

Students who complete this second year of study should be able to read and write modern standard Arabic with some fluency, to pursue study in topics that specially interest them in Arabic, and to converse freely in Arabic. Intermediate-level students will

also have had an opportunity to acquire vocabulary and terminology related to such special fields of interest as business and diplomacy.

Advanced Level

Exceptional students may wish to take a third year. These courses are arranged according to demand, but they typically include advanced work in reading and writing and lecture courses in special topics. At the end of such a course a student should be able to compete with Arab students at the university level. Alternatively, the student should be able to employ Arabic with competence and confidence in the fields of business and/or diplomacy. (See Intensive Arabic Language course listing.)

Certificate and Program Requirements

ALI Fulltime students must take twenty contact hours per week for which they are awarded twelve program credits per semester. Students who successfully complete twenty four program credits receive certificates of achievement from the Arabic Language Institute (specifying their level, i.e. elementary, intermediate or advanced), (See the Intensive Arabic Language Course listing and the number of program credits awarded for each course).

Intensive Summer Program

Director: L. Al-Sawi

The Arabic Language Institute offers an intensive summer program from the second week of June until the last week of July. Students must take twenty hours of class per week to be considered full-time. The summer curriculum includes either Modern Standard Arabic (MSA) and Egyptian Colloquial Arabic (ECA) at all levels, or Modern Standard Arabic only, both options as a full load.

In addition, a number of electives is also offered out of which each student may take up to two (based on the required credits).

A minimum of six program credits may be earned in the summer towards the Arabic Language Institute certificate.

Extra Curricular Activities/Student Cultural Activity Program

An integral part of the intensive language program, both full year & summer, is an extensive series of tours of Cairo and trips to the easily visited sites of interest all over Egypt. These tours and trips are supplemented by a lecture series. While the institute subsidizes a large portion of the expenses, including transportation and entrance fees, students are required to pay for their food and lodging.

The Arabic Language Institute cultural program also includes a cultural component featuring activities such as calligraphy, music and folkloric dance.

In addition, the program includes an end of semester summer party which is organized with the active participation of the students.

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Besides the above activities, in the summer semester the Arabic Language Institute offers a series of weekly lectures covering the cultural, educational, economic and political aspects of life in Egypt.

Center for Arabic Study Abroad

Director (U.S.A.): Mahmoud Al-Batal, Emory University, Atlanta, GA.

Co-Director (Cairo): El Said Badawi

Executive Director: Dr. Zeinab Taha

AUC's Arabic Language Institute also houses the Center for Arabic Study Abroad (CASA), an intensive advanced Arabic program for American graduate and undergraduate students who have had at least two years of instruction in Arabic. CASA is a consortium of twenty-three American universities, including AUC. CASA receives funding from the U.S. Department of Education, The Mellon, Ford and Starr Foundations with support from the Binational Fulbright Committee in Egypt, in addition to program fees paid by participants. Its objective is to raise the level and broaden the base of Arabic language competence in the American academic community.

AUC's Arabic Language Institute offers both a CASA summer program and a CASA twelve-month program beginning in June. The summer program emphasizes the spoken Arabic of Cairo with some attention to modern standard Arabic. Students in the full-year program develop a facility in the use of the four major language skills: speaking, listening, reading and writing. The CASA II program aims to provide further opportunities for CASA fellows, who have completed the CASA full-year program within the past five years, to continue to enhance their language skills and advance their Arabic-based research in Egypt. The CASA II program offers the opportunity to study for one or two semesters (fall or spring or both). In addition to these programs, CASA provides a program in Arabic for professors in the humanities & social sciences called CASA III. This program is generally offered in the summer, but can also be offered for two months during the fall or the spring.

Students are chosen to participate in the program on the basis of a competitive examination given every February in the United States. They must be American citizens or permanent residents, and be enrolled in a recognized institution of learning in the United States or Europe. During their CASA studies they are enrolled at AUC. AUC does not offer credit for intensive Arabic, but, based on certification from AUC, academic credit can normally be received from the student's home university.

Students enrolled in AUC's academic or intensive Arabic programs are eligible to apply for CASA. The CASA examination is given in Cairo at AUC every February at the same time that it is given in the United States.

Applications and further information on fellowships can be obtained from: Director, Center for Arabic Study Abroad, 1385 Oxford Rd., Emory University, Atlanta, GA 30322 and from the CASA Web Page: www.emory.edu/COLLEGE/CASA.

English Language Institute

School of Humanities and Social Sciences

Director, English Language Institute: Y. El-Ezabi

Intensive English Program Coordinator: T. Farkas

Intensive English Program Testing Specialist: B. Alfred

English 100 Coordinator: M. Hafez

English Language Teachers: N. Aboul Fetouh, M. Ateek, M. Bishara, C. Clark, A. Demian, S. Esnawi, S. Farag, H. Garas, F. Hassan, M. Ibrahim, M. Iskander, R. Jabr, L. Kamal, F. Kassabgy, N. Kassas, N. Khafagi, S. Makhoulouf, A. Mishriki, L. Moussa, H. Nashed, L. Nessim, M. El Saady, M. Sarofim, A. Shalaby, A. Shebeenie, C. Sheikholeslami, V. Stevens, E. Yoder, M. Osman, Y. Salah Eldin, J. Moos.

While the English Language Institute now offers masters and diploma programs in TEFL as described under "Fields of Study," the institute was originally founded in 1956 to offer intensive English language courses in its intensive English program to prepare non-native speakers of English for study at the undergraduate and graduate levels in the university.

Graduate Programs

Graduate students who are otherwise qualified to enter the university but whose English does not meet the necessary level of proficiency, based on the applicant's performance on the AUC English Language Proficiency Entrance Test (ELPET), or the equivalent on the TOEFL with TWE, will be admitted to ELIN 120 or 121, or placed in the appropriate modules of ENGL 123-125.

Graduate students in the intensive ELIN 120 and 121 courses are allowed a maximum of two semesters and a summer (or three semesters if no summer session is offered) to reach the level of Academic English for Graduates (see Academic English for Graduates in this section).

Intensive English for Graduates

The intensive program for graduate students offers ELIN 120 (intermediate) and ELIN 121 (advanced). Students are placed in one of the two levels according to their scores on the AUC English Language Proficiency Test (ELPET) or the TOEFL with TWE.

Content of Courses

Students are placed in sections normally comprised of up to fifteen students. Students are given a grammar review, extensive reading and writing practice, advanced vocabulary review, and practice in speaking and listening comprehension. Grading in this course is on a Pass/Fail system.

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Attendance

Attendance and participation are considered so important to this intensive language program that a student who for any reason misses the equivalent of more than 21 class hours in any one semester will be asked to withdraw. Students who withdraw from ELIN 120 or 121 may not sit for the AUC ELPET until six months have elapsed from the date of their last examination. Applicants for readmission may not submit a TOEFL (plus TWE) score. If their score is the intensive level, they will be allowed to return to ELIN 120 or 121. Students who are asked to withdraw but fail to do so will be suspended.

Suspension and Readmission

Graduate students suspended from ELIN 120 or 121 must petition for readmission and must meet all the admission requirements prevailing at the time of readmission. Readmission is not granted automatically. Students suspended from ELIN 120 or 121 who are readmitted to the university must score high enough on the AUC ELPET for direct admission to Academic English for Graduates or higher, as they will not be allowed to return to ELIN 120 or 121.

Academic English for Graduates

Academic English for graduate students consists of three non-credit modules covering effective writing (ENGL 123), academic reading (ENGL 124), listening and speaking (ENGL 125). Students who are taking all their required modules may take other courses at the same time, thus enabling them to apply what they are learning in these modules to what they will be expected to do in other graduate courses. Grading in these modules is on a Pass/Fail system.

ENGL 123 meets for two hours two times a week, while the other two modules (ENGL 124 and 125) meet for two hours one time per week. Students who have part-time or full-time jobs are strongly advised not to attempt other undergraduate or graduate courses until they have completed their academic English requirements. Students enrolled in any of the modules are expected to spend at least three hours per week outside of class in preparation for each weekly class meeting of each module in which they are enrolled (e.g., a student enrolled in three modules should expect to spend at least 9 hours per week outside class plus eight hours per week in class).

Generally students taking the modules are limited to taking courses according to the formula below:

Required Academic English modules

3 modules

2 modules

1 module

Students may take

One undergraduate course

One undergraduate course
or one graduate course

Two undergraduate courses
or one graduate and one
undergraduate course

Any student who withdraws from a module must first withdraw from any non-ENGL courses. Students who fail any given module(s) may repeat the module(s) twice. Withdrawal from a module after the 4th week will be treated as one of the allowable failures. Students who are repeating a given module will not be allowed to take concurrent courses without the written approval of the coordinator of Academic English for graduates. Students who fail the same module three times will be disqualified but may apply for readmission. Applicants for readmission must score high enough on the AUC ELPET to be exempt from English courses as they will not be allowed to return to ENGL 123-125. Applicants for readmission may not submit a TOEFL (plus TWE) score.



*Main Library,
Greek Campus*

SUMMER & WINTER SESSIONS

Summer and Winter Sessions

Director: Vice Provost M. Farag

A large number of students from Egypt and from more than thirty other countries normally attend AUC's summer session. While the majority are pursuing degrees at AUC during the academic year, many students who are not regularly enrolled at AUC join the summer session from mid-June through the end of July to pursue studies of their own interest.

Students can choose from a wide range of courses which are usually offered during the AUC summer session. Besides those courses that are usually oversubscribed during the academic year, every effort is made to offer courses of special interest to international students, such as Islamic art and architecture, Egyptology, Arab society, and Middle East-oriented courses in history, economics and management.

Intensive courses at all levels in modern standard Arabic and in Egyptian colloquial Arabic are also offered during the summer session by AUC's Arabic Language Institute. This brings to the AUC campus more students from the United States and other countries to share with Egyptian students a truly international educational experience.

The winter session provides additional opportunities to students from the University and outside to take intensive courses for academic credit. The winter session courses are normally offered during the first three weeks of January.

Extracurricular activities are planned for the students and faculty, including trips and cultural events, such as performances of Arabic music and art shows. An informal athletic program offers basketball, volleyball, tennis, soccer, and table tennis. Seminars and special lectures by distinguished visitors are also an occasional part of the summer and winter sessions.

Housing, board, medical, and other university services are provided on the same basis as during the academic year.

RESEARCH

RESEARCH

Whether part of the teaching program, the fruit of individual faculty effort, or part of an externally funded project, research represents an important commitment of the American University in Cairo. One of the objectives of the undergraduate program is to equip students with the attitudes, skills, and knowledge needed to undertake independent scholarly investigation. In most master's programs theses are required, providing opportunities for students to explore research topics in depth under the close guidance of faculty advisers.

Faculty research is encouraged and is recognized by the university as an important factor in promotion and tenure decisions. For many years the university has offered research and conference grants to full-time faculty to enable them to attend scholarly and professional conferences and to carry out research either in Egypt or abroad. Faculty of professorial rank may apply for a full-year or a one-semester sabbatical leave every seven years to undertake research and writing and to interact with faculty and participate in programs in other institutions. Administrative support to research is provided by the Office of Graduate Studies and Research and the Office of Sponsored Programs.

In addition, several units of the university are devoted exclusively to research, including the Social Research Center, the Desert Development Center, the Arabic Studies Bio-Bibliographical Research Unit, Institute for Gender and Women's Studies and the Center for American Studies and Research.

Please consult the AUC website for more information about faculty research interests and projects.

Research Support Offices

Office of Graduate Studies and Research

Director: Vice Provost M. Farag

The Office of Graduate Studies and Research (OGSR) is committed to promoting and strengthening graduate studies and research across the University.

In graduate studies, the Office coordinates graduate student recruitment and admissions, registration, non-academic advising, counseling, orientation and services; admin-

isters and monitors fellowships, assistantships, and work-study programs; collaborates with the Office of Student Financial Affairs in developing financial aid programs for graduate students; and coordinates and monitors graduate programs in the University. In consultation with the University Graduate Council, which is composed of the coordinators/directors of the graduate programs in addition to student representatives and chaired by the director of the OGSR, the Office recommends policy and interfaces with the Senate Student Affairs Committee on issues related to graduate students, and with the Senate Academic Affairs Committee on issues related to graduate programs.

In support of the University's research mission, the OGSR promotes and strengthens research throughout the University. The Office acts as a catalyst in initiating research activities in addition to providing administrative support to AUC faculty. Interdisciplinary activities such as environmental and developmental studies are encouraged. In consultation with the Research Advisory Council, the Office recommends policy and interfaces with the Senate Faculty Affairs Committee on issues related to faculty research.

The OGSR administers University-funded conference, research, research development, mini and teaching enhancement grants. In 2003-2004, 196 faculty members received support amounting to about \$366,807. One hundred and twenty six faculty members received conference grants, thirty six received research grants, twenty four received mini grants, eight received research development and two received teaching enhancement grants.

The OGSR publishes listings of faculty research interests and graduate theses in order to raise the profile of research among the AUC community and to encourage networking and collaborative research, in addition to disseminating AUC's research activities to other educational institutions, organizations and agencies in Egypt and abroad. The OGSR sponsors the annual AUC research conference, which provides a forum for faculty and graduate students to discuss research issues of common interest. The Office provides administrative support for scholarly seminars and conferences held at AUC. The OGSR collaborates with the Office of Sponsored Programs and the Office of Development in promoting externally funded research and soliciting sponsored projects.

The Office of Graduate Studies and Research also coordinates and administers the activities of honorary degrees, Wisner awards, distinguished visiting professors, excellence in research award, fellows without stipend and teaching awards.

Office of Sponsored Programs

Director: Michael R. Lewis

The Office of Sponsored Programs (OSP) represents the University in matters related to external funding for research, training and public service projects. It reviews financial agreements, monitors performance and ensures that both university and sponsor concerns are met during implementation of externally funded programs.

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The Office assists faculty in the preparation of proposals, including editing and budget development in accordance with sponsor guidelines and AUC policy. It also keeps the University community updated on grant opportunities, research funding competitions and other relevant information. Proposal writing workshops are offered by the Office to faculty and staff to strengthen proposal-writing skills.

OSP provides access to searchable databases of information on potential funding sources, such as SPIN and IRIS. In addition, proposal writing materials and aids are available at the Office for lending to faculty who require some assistance in proposal writing techniques.

OSP also has a web page on the AUC web site with information on OSP services, upcoming grant opportunities, budgetary information and AUC policies regarding external project approval, administration and implementation.

Office of African Studies

The Office of African Studies promotes research on comparative and international topics of mutual interest to scholars and policy makers in the Middle East and Africa. To this end the office provides research facilities to visiting scholars, and sponsors public lectures. Membership and collaboration with relevant research institutions enhance contacts with researchers throughout the continent and helps to promote collaborative activities.

The Office of African Studies is interdisciplinary in its hosting and promotion of research. It has hosted a number of conferences and visiting researchers over the years. In addition to hosting the IV the triennial meetings of the International Sudan Studies Association (June 1997), and the Sudanese Cultural Festival (September 1996), the Office of African Studies has also hosted workshops on issues pertaining to refugees, women, and children, reconstruction of war torn communities, and a number of workshops on alternative policies for Sudan. Visiting fellows at African Studies have included scholars from scholars from Somalia, Sudan, the Netherlands, the United Kingdom and the United States. Their projects have included studies of Eritrean women, the displaced Sudanese, and Sudanese-Egyptian relations. Currently OAS is hosting the Group for Alternative Policies for Sudan (GAPS) a network research project linking Sudanese researchers at home and diaspora and the Working Group on Reconstruction of War Torn Communities in The Middle East and Africa (RWCMEA) which is a collaborative research project initiated by OAS and MEAwards and a number of scholars from AUC. RWCMEA's first workshop was held in May 2000 and the second held in 2002.

OAS plans to maximize its locational advantage in cosmopolitan and strategic Cairo to initiate and foster collaborative research and cooperation between the Northern and Southern parts of the continent. It facilitates exposure of African researchers to international scholarship; serves as a vehicle for North-South dialogue with particular emphasis

on forging links with the emerging and spectacularly growing community of African scholars in diaspora; and contributes to capacity building in African academia through fellowships, short sabbaticals and exchange programs.

The Office also maintains an extensive collection of literature on Africa. Office activities are regularly announced on the African Studies webpage:

<http://www.aucegypt.edu/academic/oas>.

Research Centers

Social Research Center

Director and Research Professor: H. Rashad (Demography)

M. Abdel Aal (Sociology), L. El-Hamamsy (Emeritus-Anthropology), Z. Khadr (Demography), R. Langsten (Sociology), S. Mehanna (Political Science), H. Nassar (Economics), R. Saad (Anthropology), S. El-Saadani (Demography), M. Al-Sharmani (Anthropology), S. Shawky (Public Health), H. Sholkamy (Anthropology), H. Zaky (Statistics), L. El-Zeini (Demography), R. Hamed (Statistics)

The Social Research Center was established in 1953 to conduct and encourage social science research in Egypt and the Middle East. The program aims to train researchers, and to guide and assist graduate students, scholars, and organizations engaged in social science research in the area. The SRC cooperates with agencies of the Egyptian Government as well as with universities and research institutes in Egypt and abroad.

The Center's Program

The Center's research program is multidisciplinary and combines qualitative and quantitative approaches to inquiry. It strives to inform policy formulation and implementation while contributing to knowledge in the social science disciplines.

Emphasis in the Center's substantive program is on social structure, social problems, social change, and development.

In the past, SRC has conducted studies of the Nubian communities, before and after relocation; the resettlement of reclaimed land; the historical and ecological development of Cairo; evaluation of urban neighborhood services; social and economic security in Egypt; agricultural marketing; farm mechanization and agricultural labor; and patterns of cooperation among farmers.

Current research includes studies of population and fertility, a broad spectrum of development issues, the role of women, urbanization, poverty, social epidemiology, maternal and child health, water and sanitation and the environment.

In addition to its research activities, the SRC organizes training programs in various aspects of research methods and analytical techniques for the benefit of social scientists from the Middle East and North Africa. It convenes conferences, symposia, and workshops on topics included in its research agenda. The Center aims to contribute to developing skills and building institutional capabilities in the region as well as to advancing public debate about priority social issues.

For more information please refer to SRC website at:
<[Http://www.aucegypt.edu/src](http://www.aucegypt.edu/src)

Desert Development Center

Professor Emeritus: A. Bishay

Director and Research Professor: R. N. Tutwiler

The AUC Desert Development Center (DDC) was established in 1979 as a center of excellence in applied research and training. As an integral part of AUC, the DDC shares the University's educational mission and, in particular, the goal of carrying out applied research to address development challenges facing Egypt and the Middle East and North Africa Region. In addition, the DDC serves as a bridge linking together scientists and researchers in the Egyptian national institutions and civil society with their colleagues at AUC, in the Region, and in the global community. The focus of the DDC is on the environmental, social, and economic sustainability of desert communities through increased productivity and economic benefits, enhanced diversity of outputs, and improved conservation of natural resources. The DDC maintains an extensive program of research, training, and informational activities to meet its objectives.

The DDC operates two field research stations. The smaller (11 hectares) is in the urban desert development complex of Sadat City some 90 kilometers northwest of Cairo, where the research emphasis is on small-scale, labor intensive, high value agricultural activities suitable for household enterprises in urban and peri-urban desert situations. The larger research station (240 hectares) is located about 140 kilometers northwest of Cairo in the South Tahrir section of newly reclaimed desert land in Buheira Governorate. At South Tahrir, the research focus is on the needs and problems of new rural settlements in the desert, and especially the adaptation and integration of traditional farm enterprises, together with modern technologies, in sustainable farming systems for new desert settlers. The DDC operates a residential training facility with a capacity of 150 men and women trainees on the grounds of the South Tahrir Research Station. Since 1993, thousands desert farmers have received practical, hands-on training at the DDC Research Stations, where a wide range of operational demonstrations are maintained for instructional purposes. The DDC currently maintains a full time professional staff of over 55 researchers, trainers, and support personnel, in addition to 24 part-time faculty seconded from Egypt's national universities and research institutes.

As a key institute within the American University in Cairo, the DDC is a non-profit organization obtaining the majority of its operating funds from charitable grants and donations.

Research Program

Within the strategic goals of research and training for sustainable desert development, the DDC research program can be characterized under four categories:

Externally-funded Research Projects:

These are research activities based on formal proposals with specified outputs and limited duration supported financially from grants by donor organizations. A sample of recently completed and currently operational externally-funded projects include:

- Adaptation and propagation techniques of Australian pine trees (*Casuarina* species) inoculated with *Frankia* bacteria strains to promote fast growing, nitrogen fixing shelter belts with low water utilization in new desert farms and communities.
- Local Institutional Frameworks for Poverty Alleviation and Reducing Environmental Degradation in Rural Egypt.
- Assessing the Performance of Water User Associations in Egypt.
- Optimizing water use by annual and perennial crops under different desert farming systems.
- Improved architecture for desert farms and communities utilizing local materials and renewable energy.
- Utilizing renewable energy and recycling agricultural waste in desert farms and communities.

Collaborative Research and Development Programs:

The DDC has established collaborative research and development activities with other research institutions, private sector bodies, universities, and other institutions that have similar interests in desert development. Examples of current collaborative activities are:

- Socio-economic Baseline Survey and Pre-Project Characterization of the New Lands of the East Delta Development Region.
- Collaboration with the Agha Khan Foundation to develop a working model nursery at the DDC South Tahrir Station for the propagation and adaptation of ornamental trees, shrubs, climbers, and ground cover plants in South-Tahrir for establishing a National Park in the old city of Cairo.
- Cooperation with the Sixth of October Company for Agricultural Projects to establish a research and development program for the Shabab Area, West Suez Canal region.

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- Cooperation with the East Delta Desert Settlement and Development Project to establish a Socio-economic Baseline and Pre-project Characterization of the settlers and new lands in the East Delta area.
- Cooperation with the Ministry of Agriculture and the GTZ in the National Project for Improvement of Citrus Production in Egypt.
- Cooperation with the Central Laboratory for Agricultural Climate, Agricultural Research Center, Ministry of Agriculture and Land Reclamation to collect and analyze micro-climatic data at the DDC South Tahrir Station for use in modelling crop growth and pest and disease incidence due to climatic factors.
- Cooperation with Cairo university, Fayyoun Campus on screening for resistance to nematodes in tomatoes, adaptation of improved varieties, and establishment of economically sound organic production systems for small holders.

Individual Research Programs:

The DDC hosts individual post-graduate and undergraduate students, as well as non-degree researchers, provided that the individual research topics contribute to the goals and mission of the DDC. Students may be affiliated with AUC, national, or international universities or institutions.

Operational Experimentation and Assessment:

In-house applied research activities are directed to solving production and sustainability problems on the research stations of the DDC. These activities include conducting experiments and trials, testing new techniques or methods, and establishing demonstrations for training purposes. In addition to addressing immediate problems, operational experimentation and assessment of performance often provides essential information for preparing proposals for externally-funded research projects.

Training Program

DDC has established a training center unique in Egypt for its excellent residential and educational facilities located on site within an exemplary newly developed desert farm. The DDC training facility has been utilized by international and national training and development agencies; governmental and non-governmental as well as universities, research centers, and individuals.

National Training Programs on Desert Development for University Graduates

Egypt's success in expanding desert development programs while accelerating their effectiveness depends, in large part, on its ability to produce substantial numbers of people who command basic desert farming skills, and who are well grounded in desert agricultural technology. Competent, action-oriented desert agriculture workers and leaders can be produced through appropriately and purposefully designed training programs.

The DDC has been training new desert settlers since 1993 through grants provided by the Ministry of Agriculture and Land Reclamation under the United States Department of Agriculture 416B Program. The residential training at the DDC facilities is tailored to the specific needs of new settlers on small farms, many of whom have no prior experience in agriculture or farm management. The training exposes them to the major issues in developing sustainable farms and farming systems on their newly reclaimed land. In addition, they are given demonstrations and knowledge about renewable energy use and environmentally appropriate house construction and maintenance. Altogether, the DDC has trained thousands of new settlers since the inception of this program in a wide diversity of subjects in sustainable desert agriculture and resource management.

Continuing Education and Short Evening Courses

This program caters for the needs of desert farm managers and owners needing specific technical and managerial expertise. The Program consists of a series of four-week modules with three-hour class instruction twice a week at AUC in the evenings and a full working day at the DDC sites each weekend. The courses and field visits emphasize hands-on experience and deal mainly with practical problems faced by the participants. A total of almost one thousand men and women have participated in this program.

The DDC and the Center of Adult and Continuing Education at AUC have agreed to offer jointly a series of training courses on desert agribusiness, agro-industry, and applications of desert agricultural technologies and practices.

Training Programs with National Universities

The DDC provides national universities in Egypt with a variety of summer and winter session opportunities for training their students in the applied aspects of desert agriculture and development. These arrangements include the Open Education Program with Cairo University and Summer Session Practicum activities with Alexandria University, Cairo University, and Tanta University. These group-training sessions are in addition to individual student research programs conducted at the DDC research sites.

Individual Special Training

DDC offers tailored training programs for both Egyptians and non-Egyptians upon the request of individuals or their sponsors.

Internship Programs

The DDC offers two different types of internships: academic internships and residential internships. Both of these categories are open to students within and outside of the AUC community.

Academic internships are set up in consultation with interested students' academic departments. Working with DDC staff, graduates and undergraduates establish terms for their internships, including a project schedule and provisions for evaluation. If the conditions of the internship are met, students gain academic credit.

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Residential internships are designed for students who wish to further their knowledge of desert economic activity by living on site. Such internships may be tailored to individual needs by focusing on specific areas of interest, such as irrigation design, banana cultivation, etc.

The DDC also sponsors one intern through AUC's Presidential Intern program each year.

Direct Services to Desert Communities

In recent years, DDC interaction with desert communities has extended to virtually all the major desert development areas in Egypt. In addition to the areas west of the Delta where the DDC facilities are located, the DDC has been active in the East Delta zone, Port Said reclamation area, Fayyoun settlement area, East Oweinat area and Tushka in the far south. Services provided to desert communities include:

- Land survey and soil, water and plant chemical and physical analysis,
- Soil, water and plant microbiological analysis (nematode, insects, mold, rot, pathogens, etc.),
- Clinical services for diseased plants,
- Improved, higher value crops and varieties, which the DDC has tested and adapted to desert conditions. Tissue culture products and selected citrus fruit and wood-trees species are representative examples,
- Consultancies and advisory services for farm land use planning and management,
- Extension and outreach services are provided to farmers and investors through on-and off-farm demonstrations, meetings and pamphlets,
- DDC, in cooperation with the National Illiteracy Education Program, has offered evening literacy classes for both men and women in villages neighboring DDC research stations.

Arabic Studies Bio-Bibliographical Research Unit

Director: H. El-Sakkout

The Arabic Studies Bio-Bibliographical Research Unit started as a project in 1972, and later became a unit, to gather basic bibliographical data on modern Arabic literature, and make such data available to scholars and researchers. The current main activities of the Research Unit cover:

- I. Compilation of bio-bibliographical data on prominent Egyptian authors of the 20th century. To date, 8 volumes have been published, on Taha Husayn, Ibrahim al-Mazini, Abdal-Rahman Shukri, Ahmad Amin, Abbas al-Aqqad, Muhammad

Husayn Haikal, Tawfiq al-Hakim and Salah Abd Al Sabur.

- II. Compilation of bibliographical data on the major literary genres in modern Arabic literature. A six-volume work on the Arabic novel has been published in 2000.
- III. The current project aims at compiling a *Companion to Modern Arabic Literature*, along the lines of the *Oxford Companion to English Literature*, which will include entries on 19th and 20th century Arab authors and critics, the principal literary works, literary schools, literary genres, themes, allusions, and major characters in drama and fiction, as well as important figures who have made significant contributions to the development of modern Arabic literature and culture in general.

Institute for Gender & Women's Studies

Director: C. Nelson

The Institute for Gender and Women's Studies [IGWS] is a multi-purpose and interdisciplinary center that serves scholars, activists and policy makers interested in gender and women's studies in the Arab world, Southern Mediterranean, Turkey, the Caucasus, Iran and Africa. The primary function of the Institute is to serve as resource nexus within and through which research projects, educational programs, conferences, workshops, seminars and policy debates on gender and women's issues are engaged. The institute is well-positioned to benefit from the critical mass of faculty representing a variety of disciplines across the university, that teach courses, conduct research and publish on a wide-range of gender-related issues.

Prince Alwaleed Bin Talal Bin Abdulaziz Alsaud Center for American Studies and Research

Executive Director: G. Johnson

Academic Director: M. El Shorbagy

The Alwaleed Center for American Studies and Research promotes a scholarly multidisciplinary approach to the study of the United States of America addressing the concerns and needs of Egypt and the Arab world. To this end, the Center's programs facilitate, encourage, and disseminate objective, in-depth research on American subjects. It seeks to enhance the collection of library materials necessary to support students and scholars from AUC and beyond in serious research on American subjects and to facilitate access to those resources. It organizes conferences, seminars, lectures, short courses and publications designed to contribute to a more sophisticated analysis of America's varied

societies and cultures among academics, professional groups and interested publics in Egypt and the Middle East.

Located at AUC, the Center reaches out to Arab scholars promoting collaborative scholarly activities with research institutions across the Arab world and throughout the globe.

American Studies Graduate Diploma *(Under development, to be launched in the fall 2006)*

The diploma will be administered by the Center for American Studies and Research. It offers a program of multidisciplinary studies that serves as an informative background on the American society, culture and politics. It is designed to meet the needs of a broad spectrum of graduates from different professions where knowledge of the U.S. is necessary or deemed an advantage, such as journalists, junior diplomats, and business people as well as scholars who wish to follow up with MA.

Rationale

The goal of this diploma is at the heart of Center's mission. While the Center aims to help produce a new generation of Egyptian and Arab specialists on the U.S., it also seeks to foster, in the societies AUC serves, an objective, accurate, and in-depth understanding of American society, culture and politics. In Egypt and the Arab World, there is a need to cultivate a better understanding of the United States. Neither Arabs nor Americans benefit from lack of understanding of the nature and dynamics of the American society as the world's major single political and economic actor.

Becoming the first multi-disciplinary American Studies graduate program in the country, this diploma will clearly fill a gap in Egypt and the Arab World. The very nature of the program, which stresses the ideals of American liberal Arts and professional education, is also designed to bring, to AUC, graduate students from other Universities in Egypt and beyond, thus enriching the AUC students' environment.

While this program emphasizes its multidisciplinary nature through its course requirements, it is designed in a way so as to give students with different needs the flexibility to put more emphasis on one or two disciplines as they may wish.



CONTINUING EDUCATION & TRAINING PROGRAMS

CONTINUING EDUCATION AND TRAINING PROGRAMS

The University provides extensive continuing education and training programs to meet the needs of a wide variety of individuals and organizations in Egypt and the Middle East. This section gives a brief description of the programs offered by the Center for Adult and Continuing Education, the Management Center, Engineering Services, and the Adham Center for Television Journalism. The training programs offered by the Desert Development Center and Social Research are described under their entries in the section on research. For more information about continuing education and training programs, please consult the publications listed by the respective unit or visit the AUC website.

Center for Adult and Continuing Education

Dean: H. Miller

Associate Dean for Administrative Affairs and Registrar: Vacant

Associate Dean for Instructional Affairs: D. Wilmsen

Director of External Affairs: B. Sami

Projects Manager: M. El-Rashidi

Established in 1924, the Center for Adult and Continuing Education (CACE) plays a vital role in community outreach and educational programming in Egypt and the Middle East. CACE originally served as an information center, supporting lectures, films and seminars. From its early beginning, courses, programs and certificates were added, originally in the areas of English language and business and later Arabic language and translation, computers, youth programs, foreign languages, teacher education and logistics management. Today CACE's instructional programs are divided into five divisions: Arabic and Translation Studies, Business Studies, Computer Studies, English Studies and Special Studies. Instruction is offered through regular and customized course offerings. Instruction takes place through e-learning environments and at AUC's Tahrir, Zamalek, Heliopolis campuses and at 25 affiliate centers in Egypt, Jordan, Kuwait, Saudi Arabia, Syria and Yemen. CACE's programs confer professional certificates as well as grant achievement certificates or certificates of attendance.

CACE Mission Statement

The Center for Adult and Continuing Education extends the resources of the

American University in Cairo into the community by providing high quality educational opportunities for learners of all ages to enrich their lives, enhance their professional qualifications and promote their careers.

In fulfillment of our mission, we offer a wide variety of non-credit programs and actively customize new courses to respond educationally and technologically to the demands of a changing market.

In our commitment to serve the needs of diverse learning communities, we promote collaboration with local and international partners at locations throughout Egypt and abroad.

CACE Instructional Divisions

The Arabic and Translation Studies Division offers classes in translation and simultaneous interpreting designed to provide a professional foundation in the interdisciplinary nature and practice of translation and interpretation. Courses in colloquial Egyptian Arabic and Modern Standard Arabic are offered.

The Business Studies Division meets the diverse needs of today's Egyptian and Middle Eastern business markets by offering mini-certificates, professional certificates, advanced professional certificates and certificates of attendance. The certificates are designed to provide students and clients with the necessary abilities to succeed in positions in the areas of sales and marketing, accounting, investment and finance, e-business, supervisory management and travel and tourism.

The Business Studies Division is an authorized training center for international associations such as the Cambridge Career Award, the International Air Transport Association/the United Federation of Travel Agents' Associations (IATA/UFTAA) and the Managing Health and Social Care (MHSC). The division also offers review programs in the areas of accounting, investment and management such as the Certified Public Accountant (CPA), Certified Financial Analyst (CFA), Certified Management Accountant (CMA), and Certified Financial Management (CFM).

The Computer Studies Division offers the full spectrum of Information Technology courses including programming, computer networking, database management, web designing, multimedia authoring, computer graphics production and e-learning programming.

The Computer Studies Division is a Cisco Regional Academy providing the Cisco Certified Network Associate (CCNA) international certification to those who are trained on the technical advancement of networking. The Division is a member of the Microsoft IT Academy Program offering the following Microsoft certifications:

1. Microsoft Office Specialist (MOS)
2. Microsoft Certified Desktop Support Technician (MCDST)
3. Microsoft Certified System Administrator (MCSA)

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4. Microsoft Certified System Engineer (MCSE)
5. Microsoft Certified Application Developer (MCAD)
6. Microsoft Certified Solution Developer (MCSO)
7. Microsoft Certified Database Administrator (MCDBA)

The Computer Studies Division is an authorized training and testing center for the International Computer Driving License (ICDL) certificate. Training takes place at several CACE sites and the international certificate is granted under the sponsorship of the UNESCO Office in Cairo.

In addition, the Computer Studies Division manages CACE-learning initiatives which provide courses and certificates in cooperation with McGraw-Hill, Element K and Corpedia for over 1000 courses in Information Technology, project management and business development. CACE-learning students may choose from different learning experiences, such as hands-on, interactive training and multimedia presentations. Courses are customized for targeted delivery with offerings in more than six languages such as English, French, Arabic and German.

CACE-learning Information Technology courses cover desktop applications, network/ operating systems, programming and web development, web design and media. Corpedia Management Suites are offered by Peter F. Drucher Executive Management program, American Management Association, Richard Lederer Communications and the Six Sigma Yellow Belt Series.

The English Studies Division provides English language courses at all levels of proficiency, as well as specialized courses for members of various professions and students preparing for the TOEFL or the Egyptian preparatory and secondary school certificate examinations and intensive, specialized English language courses for students enrolled in or preparing for CACE professional certificate programs. The English Studies Division is experienced in providing nationally and internationally recognized pre- and in-service English language teacher training through its institutional relationships to governmental agencies with the responsibility for improvement of education in Egypt. An example of this is the Ministry of Education's Language Methodology and Development Program, the first teacher-training program of its kind in Egypt to be conducted via interactive videoconferencing.

The Division also organizes and hosts the annual international English as a Foreign Language Skills Conference.

The Special Studies Division offers German, Spanish and French language courses for adults, German, English and computer courses for young learners, and an annual Junior Summer Program for youth between the ages of 6-14 years. The Division also offers customized and tutorial courses, seminars and workshops for the benefit of the general public and individual organizations as well as providing comprehensive administrative and logistical management support services for training programs, workshops and conferences.

CACE support units include the Educational Assessment Unit, the Educational Cooperation Unit, the Office of External Affairs and the Proposals Unit.

For More Information

Information on CACE's courses, programs and Catalog may be obtained from:

Center for Adult and Continuing Education

The American University in Cairo

28 Falaki Street, Bab El-Louk, P.O. Box 2511

11511 Cairo, Egypt

Telephone: (20-2) 797-6880, (20-2) 797-6868

Fax: (20-2) 797 -6858 or (20-2) 795-7565

Email: caceinf@aucegypt.edu

WebSite: www.aucegypt.edu/cace

WebSite: www.CACe-learning.aucegypt.edu

Management Center

Director: Amr K. Mortagy

Associate Director: Sherif Kamel

The School of Business, Economics and Communication at the American University in Cairo is home to the Management Center. The Management Center fosters the acquisition and dissemination of executive training and knowledge. The Management Center's cornerstone was laid in 1987, as a gift to the American University in Cairo from a long-time benefactor and philanthropist, Sheik Abdul Latif Jameel, expanding and improving upon the management programs begun at the university in 1966. Since then, the Management Center has continued to provide the Egyptian, Middle Eastern and international communities with a base that both teaches classical management theory and practices, through the continuous introduction of innovative programs, incorporating the latest management concepts and techniques.

The Management Center focuses on the formulation of alliances and partnerships with government, public and private sector enterprises, in an effort to:

- Develop and deliver quality professional training programs
- Provide business organizations with technical assistance and on the job training

The Management Center conducts specific programs tailored to meet the needs of organizations in different disciplines. These programs integrate the theoretical and practical components of the topics at hand and localize the programs to the current and local settings relevant to the organization.

The Management Center houses three training institutes: Institute of Management Development (IMD), Institute of Banking and Finance (IBF) and Institute of Quality Management (IQM).

Institute of Management Development (IMD)

Director: Sherif Kamel

The Institute of Management Development (IMD) was founded in 1976 to provide the professional development seekers with a strong foundation in current theory, and the latest management concepts and techniques. The mission of the Institute of Management Development is to consistently strive to deliver and provide quality services in executive training and professional development. To achieve this, the institute affiliates with reputable international institutions offering the latest in management concepts.

In fulfilling its mission, the Institute of Management Development is currently offering the following postgraduate diplomas and professional certificates as part of its portfolio of programs which also includes an executive seminar series:

- **The American University in Cairo's Healthcare and Hospital Management Diploma.** This is a postgraduate diploma accredited by the Supreme Council of Universities. The diploma encompasses six courses covering the following areas: management functions, human resource strategies, marketing, information systems, finance and accounting, and total quality management (improving medical performance).
- **The American University in Cairo's Executive Management Diploma.** This is a postgraduate diploma accredited by the Supreme Council of Universities. This three-semester program offers a comprehensive overview of management issues. The diploma encompasses three courses covering the following areas: management functions, organizational behavior and business functions.
- **The American University in Cairo's Human Resource Management Diploma.** This is a post-graduate diploma accredited by the Supreme Council of Universities. The diploma focuses on issues of planning, directing and development of human resources in organizations. The diploma encompasses six courses covering the following areas: human resource planning, staffing, development and evaluation, compensation, governance and human resource information systems.
- **The American University in Cairo's Professional Certificate in Sales Management.** The sales management professional diploma is designed to prepare sales professionals with the essential management skills to enable them to compete and grow in today's professional environment. The certificate encompasses three courses covering the following areas: the selling process, setting the sales plan and implementing the sales plan.
- **The American University in Cairo's Professional Certificate in Security, Industrial Safety and Environmental Protection.** This professional certificate covers three areas, namely, buildings security, industrial safety, environmental protection and counterfeiting and faking. Building security covers the modern tech-

niques for building protection, the modern methods of controlling buildings, planning for handling fires, emergencies and natural disasters, and the modern methods of investigating internal accidents. Industrial safety and environmental protection covers the effective planning for fire prevention, raising the safety standards for manufacturing buildings, and the security procedures for handling toxic petroleum. The final area of counterfeiting and faking covers the modern methods of detecting counterfeiting and faking of documents and currencies.

- **The American University in Cairo's Professional Certificate in Entrepreneurship.** The Professional Entrepreneurship Certificate is specifically designed to meet the needs of new entrepreneurs who wish to establish their own small business or enhance their career prospects through the development of entrepreneurial skills and competencies. The certificate encompasses four courses covering the areas of entrepreneurship: starting your own business, accounting principles for small businesses, small business management, and effective small business guerilla marketing.
- **The American University in Cairo's Professional Certificate in Business Law.** The business law certificate is designed to meet the professional needs of those seeking a career in representing business clients, whether large or small publicly or privately held domestic or international. The certificate encompasses eight courses covering the areas of introduction to the laws and regulations, government regulation of business, liability of the professional, contracts, credit and banking operations, negotiable instruments and the judicial system.
- **The American University in Cairo's Professional Certificate in Information Technology Management.** The professional certificate in information technology management emphasizes the abilities and techniques necessary for the effective handling of information and the development of technological skills. The program encompasses nine courses covering the areas of information technology and information systems, information technology project management, competitive strategy, business process and organizational change, database management systems, information systems and collaborative work, information systems security and managing in the digital economy.
- **The American University in Cairo's Professional Certificate in Electronic Business.** The diffusion of information and communication technology has created an unprecedented new force in the global economy. The professional Electronic Business certificate is developed to address the needs and changes in the local and global markets. The certificate encompasses four courses covering the areas of eBusiness foundations, eBusiness strategy, eBusiness marketing and eBusiness environmental development.
- **The American University in Cairo's Advanced Professional Certificate in Electronic Business.** The diffusion of information and communication technology has created an unprecedented new force in the global economy. The professional Electronic Business advanced certificate is developed to address

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the needs and changes in the local and global markets. The advanced certificate encompasses seven courses covering the areas of eBusiness foundations, eBusiness strategy, eBusiness marketing, eBusiness environmental development, eBusiness banking and finance, eBusiness development and integration and eBusiness startup.

- **The American University in Cairo's Professional Certificate in Intellectual Property Rights.** It is essential that professionals in developing and developed countries are well versed in the rights granted to creators in industrial, commercial, literary and artistic fields. This certificate provides participants with a thorough understanding of the rights and obligations of countries and individuals with respect to intellectual property rights.

In parallel to the American University in Cairo's diplomas and professional certificates, the Institute of Management Development allies with the following international educational and professional institutions, to offer their accredited reputable professional diplomas and certificates.

- **The Integrated Marketing Communications Diploma of the International Advertising Association (IAA).** The internationally recognized diploma is considered among the highest professional qualifications in the growing fields of marketing, communication and advertising. The International Advertising Association, in collaboration with the Institute of Management Development diploma encompasses eight courses covering the following areas: principles of marketing, principles of advertising, marketing research, consumer behavior, advertising strategies, media fundamentals, integrated marketing communication and desktop publishing.
- **The Marketing Certificate of the Chartered Institute of Marketing (CIM).** In a fast changing world of employment, it is particularly useful for those moving into marketing roles from other backgrounds to learn marketing fundamentals. This British professional certificate, in collaboration with the Institute of Management Development covers the areas of marketing fundamentals, customer communication, marketing environment and marketing in practice.
- **The Marketing Professional Diploma of the Chartered Institute of Marketing (CIM).** This professional diploma is ideal for marketers concerned with managing the marketing process at an operational level and those interested in building on their knowledge with a future in management role in mind. The British professional certificate, in collaboration with the Institute of Management Development covers the areas of marketing operations, marketing customer interface, management information for marketing decisions and effective management for marketing.
- **The International Trade Marketing Specialist Certificate of the International Import-Export Institute (IIEI).** The International Import-Export Institute (IIEI), the international authority certifying the proficiency of import export trade

professionals worldwide, is offering in collaboration with the Institute of Management Development the Certified International Trade Marketing Specialist program. The certificate encompasses three courses covering the areas of exporting and importing skills, global culture and global marketing.

- **The International Trade Professional Certificate of the International Import-Export Institute (IIEI).** The International Import-Export Institute (IIEI), the international authority certifying the proficiency of import export trade professionals worldwide, is offering in collaboration with the Institute of Management Development the Certified International Trade Professional program. The certificate encompasses six courses covering the areas of exporting and importing skills, global culture and global marketing, global finance, documentation for the global village, and 21st century international logistics.
- **Institute of Management Accountants Certified Management Accountant (CMA) Exam Review Program.** The IMA learning System program prepares candidates for the CMA exam by reviewing the following four parts. The first part includes business analysis. The second part covers management accounting and reporting. The third part includes strategic management. The fourth part focuses on business applications.
- **BeckerConvisor/Devry Certified Public Accountant (CPA) Exam Review Program.** This program infuses the latest technology into classrooms to enhance Becker's proven work-and-remember learning system in preparing candidates for the CPA exam, which consists of four parts; financial accounting and reporting, auditing and attestation, regulation and business environment and concept.
- **BeckerStalla/Devry Certified Financial Analyst (CFA) Exam Review Program.** This program is divided into three levels. Candidates must complete three exams sequentially. They may sit for only one examination each year. Level I of the program focuses on the tools and concepts of investment valuation and portfolio management. Level II focuses on asset valuation. Level III focuses on portfolio management and asset allocation.
- **Power Resources Corporation Certified Internal Auditor (CIA).** The program is a valuable resource to executive management and boards of directors in accomplishing overall goals and objectives. Being a CIA gives you the professional ability to efficiently control, identify risks, and examine remedies with respect to current practice of internal auditing. The CIA consists of 4 parts.
- **The American Society of Civil Engineers (ASCE)'s Construction Project Supervisors Certificate.** The objective of this certificate is to master the construction project structure and to stay abreast with the recent developments in the engineering field. The certificate encompasses five courses covering the areas of construction project administration and claims avoidance, management and leadership skills for new engineers, planning, usage, and analysis of project scheduling,

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preparing civil engineers to work effectively and financial analysis, marketing, and human relations. The certificate is delivered by the Institute of Business Development, in collaboration with the Institute of Management Development.

Institute of Banking and Finance (AUC/IBF)

Director: Vacant

The Institute of Banking and Finance was founded in 1987 to meet the increasing need for specialized programs in the areas of banking, finance and investment. Due to the introduction of new economic systems and the expansion of international banking and the promotion of foreign investments in Egypt and the Middle East, the institute caters to the needs of professionals and executives by introducing them to the latest trends and applications in the areas of international business, foreign investment, corporate finance, and investment banking.

The Institute of Banking and Finance implements a number of programs and certificates addressing local needs and requirements, offering the following programs among its portfolio of courses and programs:

- **The American University in Cairo's Certified Banking Credit Analyst (CBCA) Program.** This program focuses on all aspects of banking credit whether short-term, medium-term or long-term. It includes concepts and theories that creditors need to familiarize with, involving the credit environment through case studies and applications to reflect real-case situations from the market in Egypt.
- **The American University in Cairo's Certified Business and Corporate Specialist (CCBCS) Program.** In the increasingly competitive Egyptian environment, companies need to make sure that they are properly developing a practical approach to their business, corporate and project finance strategies. This program provides technical and theoretical approaches to a variety of financial techniques. The program provides a comprehensive coverage of all associated opportunities and risks with each type of project.
- **The American University in Cairo's Personal/Retail/Consumer Banking Professional Certificate.** Personal/Retail/Consumer Banking is an important trend for major worldwide banks and financial institutions. It is critical in combating today's fierce competition and globalization, hence meeting and satisfying the needs of the most important segment in the market. This certificate emphasizes the retail banking concepts, theories, products, services as well as the main distribution channels.
- **The American University in Cairo's Finance and Investment for Businessmen and Non-Financial Managers Program.** This program has been especially designed to meet the needs of businessmen and non-financial managers with background in finance and investment to help them manage and direct their businesses towards profitability and achieve a competitive edge in the marketplace.

- **The American University in Cairo's Certified Investment Specialist (CIS) Program.** This program is designed for participants interested in building a strong foundation in the areas of capital market and investment. The program applies mainly to the Egyptian capital market, providing exposure to the structure of all major instruments, as well as the analysis and techniques for trading securities and brokerage. It covers financial restructuring, mergers and acquisitions, asset management and investment banking.
- **The American University in Cairo's Certified Asset Management Specialist (CAMS) Program.** This program provides participants with a thorough introduction to the instruments and concepts of portfolio management. Participants will learn to effectively use market instruments in constructing and managing a portfolio, the mathematics of these instruments, as well as practical application of the theories studied.

Institute of Quality Management (IQM)

Director: Samia Abdel Latif

Established in 1994, the Institute of Quality Management became one of the pioneering institutions in total quality management in Egypt and the Middle East. The institute promotes quality disciplines and systems in the business and healthcare sectors. It offers a wide range of educational, training and technical assistance programs for organizations and individuals in the area of quality management. The Institute of Quality Management is supported by a team of experienced, qualified practitioners with substantial hands-on experience to turn quality management principles and concepts into practice. The institute's programs and activities are divided into segments namely, education and training for the business sector and education and training for healthcare providers.

Programs Offered for the Business Sector

- **The American University in Cairo's Diploma in Total Quality Management with an emphasis on Six Sigma and ISO Systems Implementation.** This is a post-graduate diploma accredited by the Egyptian Supreme Council of Universities. The program is designed to qualify participants to be successful quality managers and provide them with the necessary skills to lead their companies when establishing quality, Six Sigma or environmental management systems that satisfy the requirements of international standards such as ISO 9000 and ISO 14000. The program also provides participants with about 70% of the body of knowledge of the certified quality manager certificate from the American Society for Quality (ASQ) in the United States of America.
- **The American University in Cairo's Quality Technicians Professional Certificate.** The certificate is designed for quality technicians who perform quality problems analysis, prepare inspection plans and work instructions, measure process performance, and prepare formal reports using fundamentals statistical methods. The certificate duration is two semesters, it is offered in Arabic to ensure that participants gain the maximum benefit.

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- **The American University in Cairo's Quality Skills Training Programs.** The Institute of Quality Management offers a wide range of short and intensive courses that provide participants with skills needed for the implementation of ISO-based systems. These courses are from 3 - 5 days long.
- **The American University in Cairo's Industrial Operations Training Programs.** The Institute of Quality Management provides short and intensive training programs in the area of industrial operations management. The institute provides several standard programs in addition to a wide range of contractual programs that are organized upon customer request.
- **The American Society for Quality (ASQ) Certified Quality Manager (CQM) Program.** This certificate prepares participants for the exam of certified quality manager held by the American Society for Quality (ASQ). This exam was held for the first time in Egypt in October 2000 at the premises of the Institute of Quality Management, which is one of ASQ's international organizations. The Institute of Quality Management has developed the training material required to cover the body of knowledge for the certified quality manager exam and continuously work to make the program competitive and unique in the marketplace.

Programs Offered for the Healthcare Sector

- **The American University in Cairo's Diploma in Total Quality Management with an emphasis on Healthcare Reform.** This is a three-semester post-graduate diploma accredited by the Egyptian Supreme Council of Universities. Each semester is twelve weeks long and covers two courses. Classes meet once a week. The six courses of the diploma are designed to provide the participants with the necessary background, together with hands-on-experience to implement what is learned in real practice context. The participants receive about 70% of the body knowledge required for the exam of the Health Care Quality Certification Board.
- **The American University in Cairo's Quality Improvement Tools for Healthcare Program.** The objective of this program is to identify specific methods for improving healthcare services. The program provides a structured methodology for developing organization wide quality improvement management systems.

In parallel to the above mentioned diplomas and professional certificates, the Institute of Quality Management in collaboration with Quality America-USA offers Six Sigma training certification for:

- **Six Sigma Black Belt certificate.** The internationally recognized Black Belt certificate is considered among the highest professional qualification in the field of Six Sigma. A Black Belt is an employee at a managerial level or a technical specialist who is assigned the full responsibility to implement Six Sigma throughout the business unit. Black Belts are on site Six Sigma implementation experts, with the ability to develop, coach and lead cross-functional

process improvement teams. The program consists of four one-month modules. Practical application of training is performed through each participant's projects and reviewed throughout the program. Additionally the application of Six Sigma methodology to the different business types: Manufacturing, Development, and Transactional processes are emphasized.

- **Six Sigma Green Belt certificate.** A Green Belt is an employee of the organization who will participate in a Six Sigma project team. Green Belts are employees trained in Basic Six Sigma concepts, including project management, team building, general problem solving and statistical analysis. They work as a part of a team assigned to a given project, maintaining their operational roles in the organization.

Engineering Services

Director: M. Farag

Engineering Services was initiated in 1983 with the objective of strengthening the relationship between the Department of Engineering at AUC and local industry. Since then, Engineering Services activities have steadily grown. More than one hundred forty public- and private-sector companies and governmental agencies use Engineering Services, and more than one hundred of them are now regular clients.

Engineering Services activities are performed by the AUC faculty in addition to professors from the national universities, engineers from industry and specialists from government agencies. The activities can be grouped into:

1. **Engineering development programs** which consist of intensive short courses and are designed for practicing engineers in a wide range of specializations.
2. **Special training programs** are tailor-made courses which are intended for personnel of a given organization on a particular topic. The programs can be given in-house or at AUC.
3. **Professional Program in Project Management** trains engineers and other individuals to become project managers and equips them with modern techniques in this field. Six semester-long courses (45 contact hours each) are required for the Professional Certificate in Project Management.
4. **Professional Program in Computer Aided Engineering** enables engineers to effectively apply up-to-date computer-based techniques in their areas of interest. Six semester-long courses (45 contact hours each) are required for the Professional Certificate in Computer-Aided Engineering.
5. **Professional Program in Environmental Engineering** introduces engineers to different disciplines of environmental quality assessment, management and control. Six-semester-long courses (45 contact hours each) are required for the Professional Certificate in Environmental Engineering.

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6. **Professional Program in Information Technology** trains engineers, managers and other individuals to become IT-professionals and develop techniques in this field. Six semester-long courses (45 contact hours each) are required for the Professional Certificate in IT.
7. **Professional Program in Contractual & Legal Aspects in Constructions Industry** gives engineers, lawyers and accountants who are involved in the construction industry in-depth knowledge about the competitive use of contracts in modern organizations.
8. **Professional Program in Quality and ISO 9000** qualifies engineers in different disciplines in quality assurance and control. The program also introduces engineers to the ISO 9000. Six semester-long courses (45 contact hours each) are required for the Professional Certificate in Quality Assurance.
9. **Professional Program in Welding Engineering** introduces engineers to different welding techniques, technologies, metallurgy, consumables and welding design. Six semester-long courses (45 contact hours each) are required for the Professional Certificate in Welding Engineering.
10. **Industrial research** involves long-term projects that are conducted according to a mutually acceptable contract.
11. **Advisory services** are conducted on the basis of case-by-case contracts and cover short-term projects, aimed at solving specific problems or supplying information in a given field to users of this service.

Adham Center for Television Journalism


Director: L. Pintak

Technical Coordinator: J. Sandle

The professional development program offered by the Kamal Adham Center for Television Journalism in the Department of Journalism and Mass Communication is designed for those currently working in television, journalism, advertising, or other professional activities directly related to television news production.

The number of weeks and the number of hours of instruction per week are tailored to the needs of specific groups by the center. The center draws appropriate elements for such programs from the contents of courses offered to undergraduate and graduate students.

Programs can include a course in Broadcast-Journalism Arabic developed with and offered by the Arabic Language Institute.

A sepia-toned photograph of a courtyard. In the foreground, there is a central fountain with a tiered, octagonal base and a lantern-like structure on top. The fountain is surrounded by a decorative, geometric tile pattern. In the background, a group of people are sitting on a wide set of steps leading up to a building. The building has a large, arched doorway and two smaller windows on either side, each with a decorative star-shaped ornament above it. The overall scene is peaceful and suggests a place of study or reflection.

APPENDIX: PERSONNEL & ENROLLMENT

APPENDIX: PERSONNEL & ENROLLMENT

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PERSONNEL & ENROLLMENT 505

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Anthony, Cynthia, *Director of Government Relations*

Student Enrollment Statistics

In the fall semester of 2004, the university enrolled 5,294 students in all of its academic programs. During the 2003-2004 fiscal year 32,556* individuals were served by the non-credit programs and courses in the Center for Adult and Continuing Education.

The tables below give breakdowns of the enrollment in the first semester of the academic year 2004-2005. The abbreviations are: Undergraduate Program, UG; Graduate Program, G; Diploma Program, DP; Non-degree, ND; Center for Adult and Continuing Education, CACE; Center for Arabic Study Abroad, CASA; Arabic Language Institute, ALIN; Freshman, F; Sophomore, S; Junior, J; Senior, S; Special Status, SPSTATUS; Preparatory English, PREP ENG.

Enrollment Fall 2004

Academic Programs	
Undergraduate	3,940
Graduate Degree	928
Not Seeking a Degree	
Graduate Diploma	22
Center for Arabic Study Abroad	28
Arabic Language Institute	104
Non-degree and Auditors	272
Center for Adult and Continuing Education*	32,556

Student Status

New students	1,371
Readmitted & Returning	3,923
Male	2,474
Female	2,820

Nationality	UG	G	DP	ND CASA & ALIN	TOTAL
1. Argentina	0	1	0	0	1
2. Armenia	3	0	0	0	3
3. Australia	1	0	0	0	1
4. Austria	3	0	0	0	3
5. Bahrain	1	0	0	0	1
6. Belgium	1	0	0	1	2
7. Bosnia	1	0	0	0	1

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Nationality	UG	G	DP	ND CASA & ALIN	TOTAL
8. Bulgaria	0	0	0	1	1
9. Burkina Fasu	0	0	0	1	1
10. Cameroon	0	2	0	0	2
11. Canada	9	5	1	8	23
12. Central African Republic	1	0	0	0	1
13. Croatia	2	0	0	0	2
14. Cyprus	0	0	0	1	1
15. Czech Republic	0	0	0	1	1
16. Denmark	1	1	0	1	3
17. Ecuador	1	0	0	0	1
18. Egypt	3577	776	11	34	4398
19. Ethiopia	1	0	0	0	1
20. France	1	1	0	1	3
21. Germany	10	3	1	9	23
22. Ghana	0	0	1	1	2
23. Greece	2	0	0	0	2
24. Guatemala	2	0	0	0	2
25. Iceland	0	1	0	1	2
26. India	7	1	0	6	14
27. Indonesia	1	0	0	2	3
28. Iran	2	0	0	0	2
29. Iraq	3	2	0	0	5
30. Ireland	1	0	0	0	1
31. Italy	4	0	0	1	5
32. Japan	3	1	0	5	9
33. Jordan	50	6	0	0	56
34. Kazakhstan	1	1	0	0	2
35. Kenya	1	0	0	1	2
36. Korea	4	1	0	3	8
37. Kuwait	4	2	0	0	6
38. Lebanon	9	1	0	0	10
39. Libya	6	1	0	0	7
40. Malta	2	0	0	0	2
41. Morocco	0	0	0	1	1
42. Mozambique	0	2	0	0	2
43. Netherlands	2	0	0	0	2
44. Nigeria	4	2	0	0	6
45. Norway	0	7	0	16	23
46. Pakistan	4	0	0	0	4
47. Palestine	34	5	0	0	39
48. Poland	1	0	0	0	1
49. Portugal	0	1	0	0	1
50. Qatar	2	1	0	0	3

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Nationality	UG	G	DP	ND CASA & ALIN	TOTAL
51. Romania	1	1	0	0	2
52. Russia	1	1	0	0	2
53. Saudi Arabia	52	7	0	0	59
54. Sierra Leon	0	0	1	0	1
55. Singapore	0	0	0	4	4
56. Somalia	0	0	0	1	1
57. Spain	2	1	0	0	3
58. Sri Lanka	3	0	0	2	5
59. Sudan	25	8	0	0	33
60. Switzerland	0	1	0	0	1
61. Syria	18	0	0	0	18
62. Taiwan	0	0	0	1	1
63. Tanzania	1	0	1	0	2
64. Thailand	3	2	0	1	6
65. Trinidad & Tobago	0	0	0	1	1
66. Tunisia	2	0	0	0	2
67. Turkey	0	3	0	0	3
68. Uganda	0	1	1	1	3
69. United Emirates	4	0	0	0	4
70. United Kingdom	8	4	0	5	17
71. U.S.A.	47	72	5	292	416
72. Yemen	10	2	0	0	12
73. Yugoslavia	1	0	0	0	1
74. Zimbabwe	0	1	0	1	2
Total	3940	928	22	404	5294

Program of Study	PREP ENG	F	S	J	S	SPSTATUS	G	TOTAL
Accounting	7	7	26	28	51	0	0	119
Actuarial Science	0	3	3	0	0	0	0	6
Anthropology	0	2	4	10	2	0	0	18
Arabic Language Institute	0	0	0	0	0	104	0	104
Arabic Studies	0	0	0	3	0	0	36	39
Art	2	14	8	9	11	0	0	44
Biology	0	9	20	7	15	0	0	51

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Program of Study	PREP ENG	F	S	J	S	SPSTATUS	G	TOTAL
Business Administration	10	37	54	91	163	0	155	510
Center for Arabic Study Abroad	0	0	0	0	0	28	0	28
Chemistry	2	6	8	10	5	0	0	31
Computer Science	7	35	63	61	140	0	66	372
Construction Engineering	5	20	22	23	84	0	0	154
Economics	4	16	27	62	67	0	60	236
Economics-International Development	0	0	0	0	0	0	25	25
Egyptology	0	2	3	3	5	0	0	13
Electronics Engineering	3	29	22	28	63	0	0	145
Engineering	1	88	40	3	1	0	77	210
English & comparative comparative Literature	1	10	3	7	5	0	19	45
Forced Migration & Refugee Studies Diploma	0	0	0	0	0	13	0	13
Islamic Studies	0	0	0	0	0	6	0	6
Journalism and Mass Communication	13	70	161	136	101	0	62	543
Law	0	0	0	0	0	0	25	25
Mathematics	0	1	5	3	3	0	0	12
Mechanical Engineering	16	32	42	54	145	0	0	289
Middle East Studies	0	2	1	2	6	0	43	54

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Program of Study	PREP ENG	F	S	J	S	SPSTATUS	G	TOTAL
Modern History	0	2	8	3	2	0	0	15
Non-Degree	0	0	0	0	0	272	0	272
Philosophy	0	1	7	7	7	0	0	22
Physics	0	1	5	13	14	0	16	49
Political Science	0	21	59	102	80	0	161	423
Psychology	1	15	23	28	26	0	0	93
Public Administration	0	0	0	0	0	0	49	49
Sociology	0	2	4	12	1	0	0	19
Sociology/ Anthropology (Masters)	0	0	0	0	0	0	49	49
TAFL	0	0	0	0	0	0	29	29
TEFL	0	0	0	0	0	0	56	56
Television Journalism	0	0	0	0	0	3	0	3
Theater	1	1	6	5	8	0	0	21
Undeclared	158	772	170	2	0	0	0	1102
TOTAL	231	1198	794	712	1005	426	928	5294

Graduates

The American University in Cairo awarded 876 bachelor's degrees and 186 master's degrees in the academic year 2003-2004. Of the 876 undergraduate degrees, 125 were awarded with honors, 115 with high honors, and 64 with highest honors.