American University in Cairo
ENGR 101: Introduction to Engineering
Spring 2009

Instructor: Dr. Mustafa Arafa
E-mail: mharafa@aucegypt.edu
Office: 2025 SSE
Website: http://www.aucegypt.edu/faculty/mharafa

Course description:
The course must be taken in the year of admission to the engineering program.
History of engineering. Engineering fields of specialization and curricula. The engineering profession: team work,
professionalism, ethics, licensing, communication and societal obligations. Engineering support personnel and
activities. Engineering approach to problem solving. Examples of major engineering projects. Course project.


References:
1. George C. Beakley, Careers in Engineering and Technology.
4. Leroy S. Fletcher, Introduction to Engineering Including Fortran Programming.
6. R. S. Kirby, Engineering in History.
7. E. J. Krick, An Introduction to Engineering Design.

Course Objectives:
The course is designed to identify various aspects and areas of engineering to freshman engineering students and
open the door to their discussions, question and inquiries. The course also introduces some basic tools and
methods used by engineers.

Course Outcomes:
After completing the course, students will be able to:
1. Identify and describe the engineering field of specialization.
2. Explain the different career paths for engineers.
3. Practice the engineering approach to problem solving.
4. Identify the engineer’s ethical and societal responsibilities.
5. Practice technical writing and presentation using computer tools.
6. Work in a team.

Topics:
2. Engineering fields of specialization.
3. Career paths for engineers
4. Ethics in engineering
5. Engineering communication and presentation
6. The engineering approach to problem solving.

Grading Policy:
Assignments 20%
Project 25%
Midterm exam 20%
Comprehensive final exam 30%
Class performance and attendance 5%