

ENGR 101 / ETCS 101
Fall 2004
Introduction to Engineering, Technology, and Computer Science
Syllabus

Course Description: Introduction the professions of engineering, engineering technology, and computer science. Focus is on academic, career, and personal development success strategies including life long learning skills and professional ethics. Assignments and projects are of a multidisciplinary nature. Credit Hours: 1. No prerequisites.

Course Outcomes:

1. Increase awareness and understanding of the various degree programs within the School of Engineering, Technology, and Computer Science
2. Acquire a deeper familiarity with the academic and career support services at IPFW
3. Develop and practice effective study and time management skills
4. Understand and apply concepts of professional and ethical responsibility (f)
5. Communicate effectively through essays and reports (g)
6. Work in multidisciplinary teams to perform design projects (b, d)
7. Design a system to meet desired needs and constraints (b, c)

ABET Program Outcomes

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs
- (d) an ability to function on multi-disciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global and societal context
- (i) a recognition of the need for, an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use techniques, skills, and modern engineering tools necessary for engineering practice

Instructor: Professor Carlos Pomalaza-Ráez,
Chair of the Department of Engineering
Office: ET 327H
Office hours: Thursday 2:30 to 3:30, Friday 9:00 to 10:00 and 2:30 to 3:30
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Required Textbook: *Engineering*, a compilation published by McGraw-Hill, Inc (2002).

Supplementary readings: Additional readings will be distributed through the instructor's website, and/or in class. Students are expected to become familiar with all required reading.

Activation of Computer Accounts (lab, email, web space): Students should activate their lab, e-mail, and Web Space accounts. Information on how to activate these accounts can be found at <http://www.its.ipfw.edu/students>

Evaluation:

The final letter grade will be assigned according to the following standards:

- A 90 – 100
- B 80 - 89
- C 70 - 79
- D 60 - 69
- F 0 - 59

Late Work: Late work will not normally be accepted

Attendance policy: Attendance is mandatory. *Missing more than one meeting without a valid excuse will result in a failing grade.* For the definition of valid excuses, please refer to the IPFW Bulletin or to the IPFW Student Handbook. We expect students to participate in each class session, complete all required work, and be thoughtful and attentive.

Tardiness: Late arrival to the classroom disturbs everyone. Please do **not** be late, but if you are unavoidably delayed then join the class quietly and with minimal disturbance.

Schedule and Themes

- 1 Introduction and Administrative overview of course
- 2 Student Survival Skills; Study and Time Management;
- 3-4. Poster Design Principles
- 5-6 ETCS Professions: Industry Expectations; Decision-Making Methodologies
 - ✓ Engineering
 - ✓ Technology
 - ✓ Computer Science
- 7-8 Academic Career Services; Co-Op Program; Resumes; Interviews
- 9-10 Communication Skills: Technical Writing, Presentations, Library Resources
- 11-12 Professional Ethics: Case Histories and Principles
- 13 Multidisciplinary Teamwork: Project Management & Cross-Functional Skills
- 14-15 Class Presentations