58.101: Introduction to Engineering Technology (3)

Fall-2007 Course Syllabus

# **Instructor:** Dr. Ju Xin

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**Class Location/Hour:**HSC-G20; Tu/Th 11:00 AM – 12:15 PM

# **Office Hours**: M/T/Th: 10:00-11:00; M/W: 11:00-12:00; or walk-in

**Catalogue Description:** History of engineering and technology; engineering technology as a career; academic success strategies; organizational structure of industries; project management; oral and written communication skills; and seminars by practicing engineering technologists including visit to an engineering industry. Three hours lecture per week.

**Textbook:** R. W. Larsen, “Engineering with Excel,” 2nd edition, Pearson-Prentice Hall, 2005 (ISBN: 0-13-147511-8)

**References:** P. Schiavone, “Engineering Success,” 2nd edition, Pearson-Prentice Hall, 2002 (ISBN: 0-13041827-7)

J. N. Jensen, “A User’s Guide to Engineering,” Pearson-Prentice Hall, 2006 (ISBN: 0-13-48025-1)

S. Moaveni, “Engineering Fundamentals,” 2nd edition, Thomson, 2005 (ISBN: 0-534-42459-7)

K. Hagen, “Introduction to Engineering Analysis,” 2nd edition, Pearson-Prentice Hall, 2005 (ISBN: 0-13-145332-7)

**Course Content:** Academic success strategies

Engineering/technology profession

Invited lectures (student co-op experience/alumni job experience)

Engineering discipline research and presentation

Problem solving using *Excel*

Engineering mechanics

Electrical circuit fundamentals

Printed circuit board assembly and testing

Impromptu design experiences

**Grading Policy:**

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| Homework | 30% |
| Impromptu designs/Circuit board assembly & testing | 10% |
| Engineering discipline research report/presentation | 10% |
| Exam I | 15% |
| Exam II | 15% |
| Final Exam | 20% |

**Grades:** A: 93-100, A-: 90-92, B+: 86-89, B: 83-85, B-: 80-82, C+: 76-79, C: 73-75, C-: 70-72, D+: 66-69, D: 63-65, D-: 60-62, E: 0-59.

**Note:** Make-up exams are not given except when a University acceptable excuse (i.e. illness warranting a physician’s care, death in the immediate family, and sanctioned varsity athlete’s events) is supplied with documentation prior to the exam. Make-up exams will be a mixed format which includes essays and possibly an oral component. Final grade is FINAL, no work may be handed in for additional credit after the final exam.

**Attendance:** Attendance is expected at all classes. Excused absence will be handled according to the student Handbook (See ***Pilot*** for definition of an excused absence or refer to University policy PRP 3506). The instructor assumes no responsibility for information, materials, or tests missed due to unexcused absences.

**Code of Conduct:** Any behavior which is disruptive to the classroom, including talking, cell phone use (turn it off), pagers (turn to vibrate), sleeping or cursing will not be tolerated and will result in being asked to leave the classroom. Police services will be called if warranted.

**Academic Integrity:** University policy PRP 3512 on Academic Integrity will be strictly followed in this course. Any violations of this policy will be reported to the academic committee.

**Accommodations:** Students in need of special accommodations should see me in the first week with their paperwork from Accommodative Services.

**Professional Engineering Society Websites:**

American Academy of Environmental Engineers (AAEE) [www.aaee.net](http://www.aaee.net)

American Congress on Surveying and mapping (ACSM) [www.landsurveyor.com/acsm](http://www.landsurveyor.com/acsm)

American Consulting Engineers Council (ACEC) [www.acec.org](http://www.acec.org)

American Institute of Aeronautics and Astronautics (AIAA) [www.aiaa.org](http://www.aiaa.org)

American Institute of Chemical Engineers (AIChE) [www.aiche.org](http://www.aiche.org)

American Nuclear Society (ANS) [www.ans.org](http://www.ans.org)

American Society of Agricultural Engineers (ASAE) [www.asae.org](http://www.asae.org)

American Society of Civil Engineers (ASCE) [www.asce.org](http://www.asce.org)

American Society of Heating, Refrigeration and [www.ashrae.org](http://www.ashrae.org)

Air-Conditioning Engineers (ASHRAE)

American Society of Mechanical Engineers (ASME) [www.asme.org](http://www.asme.org)

American Society for Precision Engineering (ASPE) [www.aspe.net](http://www.aspe.net)

American Society of Safety Engineers (ASSE) [www.asse.org](http://www.asse.org)

Association for Computing Machinery (ACM) [www.acm.org](http://www.acm.org)

**The Institute of Electrical and Electronics Engineers (IEEE)** [**www.ieee.org**](http://www.ieee.org)

Institute of Industrial Engineers (IIE) [www.iienet.org](http://www.iienet.org)

The International Society for Measurement and Control (ISA) [www.isa.org](http://www.isa.org)

Materials Research Society (MRS) [www.mrs.org](http://www.mrs.org)

The Minerals, Metals, and Materials Society (TMS) [www.tms.org](http://www.tms.org)

National Council of Examiners for Engineering and Surveying (NCEES) [www.ncees.org](http://www.ncees.org)

National Institute of Ceramic Engineers (NICE) [www.acers.org](http://www.acers.org)

National Society of Professional Engineers (NSPE) [www.nspe.org](http://www.nspe.org)

Society of Automotive Engineers (SAE) [www.sae.org](http://www.sae.org)

Society of Manufacturing Engineers (SME) [www.sme.org](http://www.sme.org)

Society of Mining, Metallurgy, and Exploration (SME-AIME) [www.smenet.org](http://www.smenet.org)

Society of Naval Architects and marine Engineers (SNAME) [www.sname.org](http://www.sname.org)

Society of Petroleum Engineers (SPE) [www.spe.org](http://www.spe.org)

Society of Plastics Engineers (SPE) [www.4spe.org](http://www.4spe.org)