Department of Engineering and Technology
Kimmel School

Course Syllabus for Fall 2009

ENGR 199 – Introduction to Engineering Principles and Practices I
3 Credits

Instructor: Dr. Yeqin Huang

Contact Info:
Office: Belk 337
Office Hours: Posted on office door
Office Phone: 227-2543
E-mail: yhuang@email.wcu.edu

Meeting Periods: Monday, Wednesday, 1:25 – 3:05, in Belk 355

Course Description: An introduction to the electrical engineering discipline, curriculum, personal and professional development, teamwork, project planning, communication skills, and conceptual design engineering.

Course Goals: Upon completion of the course, the student will be able to accomplish the following:

1) Describe the nature of engineering as a profession and the commonalities and differences of various engineering disciplines.
2) Demonstrate a basic understanding of the engineering design process by successfully designing, constructing, and testing a project solution that meets client requirements and performance specifications.
3) Apply knowledge of basic engineering mathematics to the problem-solving and design process.
4) Productively contribute as a member of a team to successfully accomplish project goals.
5) Demonstrate the ability to effectively communicate within the engineering profession through presentations and a variety of technical writing formats.
6) Discuss and demonstrate knowledge of lifelong skills, in addition to technical knowledge, that will produce successful engineering professionals.

Prerequisites: None.

Corequisites: None.

Required Text: University of North Carolina at Charlotte (2005). *Introduction to Engineering.* ISBN: 0-5369-5105-5.

References: Beer, D.F. & McMurrey, D. (2005). *A Guide to Writing as an Engineer, 2nd Ed.*. Hoboken, New Jersey: John Wiley & Sons, Inc.. ISBN: 0-471-43074-9.

Covey, Stephen R. (1990). *The 7 Habits of Highly Effective People*. New York, New York: Simon & Shuster. ISBN: 0-671-66398-4.

Hjortshoj, Keith. (2001). *The Transition to College Writing*. Boston, New York: Bedford/St. Martin's. ISBN: 0312149166.

Instructional Approach: Course material will be introduced during lecture. Reading, writing and homework assignments will reinforce material covered in class.

In addition to lectures and homework, students will work in groups to complete 3 engineering design projects. Project teams will make use of the engineering process to generate possible design solutions, select and implement the best candidate solution, collect test data, and present their work to the class.

Evaluation: Each student will be evaluated based on performance in the following areas. Respective weights of each performance area are as noted. This grading policy may be modified by each individual instructor.

- Papers 25%
- Projects 45%
- Participation 10%
- Final exam 20%

Peer evaluations will be strongly considered for students with borderline grades.

Students must return all course project materials. Failure to return materials may result in failing grades for all members of a project team.

Grading Scale: The grading scale below will be used to determine final grades:

Numerical Course Average	Grade Assigned
90 - 100	A
80 - 89	B
70 - 79	C
< 70	U

Attendance: Students are required to attend all lectures, all project sessions, and one professional seminar.

Assignments: Timely and full completion of assignments is vital to student success in this course. To this end, the following policies will be in effect:

- Students are expected to submit work on time. Assignments submitted after the due date will not be accepted.
- No make-up exams will be given unless the instructor is notified prior to the absence and/or corroborating documentation of the reason for the absence is provided.
- Assignments missed due to an excused absence will be due during the next class period.

Honor Code: Students are expected to comply with the spirit and intent of the University Academic Honesty Policy as stated in the Undergraduate Catalogue**. Visit WCU's Undergraduate Student Handbook for all related policies and procedures. http://www.wcu.edu/studentd/StudentHandbook.** Evidence of academic dishonesty will result in a grade of F (numerically "0") for that assignment on the first infraction. A second infraction will result in a grade of F for the course.

Disabilities: Western Carolina University is committed to providing equal educational opportunities for students with documented disabilities. Students who require disability services or reasonable accommodations must identify themselves as having a disability and provide current diagnostic documentation to Disability Services. All information is confidential. Please contact Disability Services for more information at (828) 227-2716 or 144 Killian Annex.

Classroom Policies: The following policies will be in effect during class meetings and project sessions:

- Cell phones must be turned off during class time.
- Drinks, food and tobacco are not permitted in classrooms or laboratories.
- Instant messenger, AOL or other non-instructional software is not permitted on classroom or lab computers. Printing of material in lab which is not course-related is also not permitted.

CoursEval Dates: Nov. 22 - Dec. 6

Final Exam Date: Dec. 16 (Wednesday) 3:00 – 5:30

Weekly Lesson Plan: The following topics will be covered during the course of the semester. The duration of attention to each topic will be determined as best meets the needs of the class members.

- Different engineering disciplines and roles
- Basic computer applications
- Research
- Conceptual design engineering
- Project planning
- Cost estimating
- Units cancellation and basic calculations
- Teamwork skills
- Personal and professional development
- Oral and written communications