SOUTHEASTERN LOUISIANA UNIVERSITY

Department of Computer Science & Industrial Technology

ET 493 – Senior Design I
Spring 2016

Instructor: Junkun Ma
Office Location: Room 329C, Fayard Hall
Phone: (985)549-2501
E-mail: junkun.ma@selu.edu

Lecture Time: Required weekly advising meetings TBA, and sometimes Friday
Lecture Location: Fayard Hall 205
Office Hours: 9:30AM~12:00PM & 1:00PM~5:00PM Tu
10:00AM~12:00PM Fr ONLINE office hour
Other time by appointment

THE FOLLOWING IS A TENTATIVE PLAN. THE INSTRUCTOR RESERVES
THE RIGHT TO MAKE CHANGES TO THIS SYLLUBUS DURING THE
SEMESTER BASED ON PROGRESS AND CHANGES OF OTHER CONDITIONS.

Course Description:
Credit 3 hours. Co-requisites: Engineering Technology 492 and Senior standing. This
course is the first part of the Capstone Design Project. It covers engineering ethics,
teamwork and leadership, problem solving, oral and written technical communication,
project management, and the integration of ET with real-world examples such as case
studies in computer systems, robots, and mechatronics. All team projects are subject to
instructor’s approval. Three credits will be awarded upon successful completion of this
course.

Course Objectives:
1. The students will be able to:
2. Understand the objectives of engineering design projects
3. Have education and hands-on experience in the stages of engineering design
4. Have experience in teamwork, project planning, execution, and monitoring
5. Have experience in technical communication, both written and oral

Course Materials:
- Notes and materials provided as the semester proceeds.

Grades:
1. Grades will be assigned according to the following scale.
   90-100 = A, Superior
   80-89 = B, Very Good
70-79 = C, Average  
60-69 = D, Below Average  
59 or lower = F, Failure

Note: Students MUST score a “C” or above in all courses within their major. Otherwise, they must retake the course.

2. Basis for assigning grades:
   a.) Three exams (two mid-terms and one final): 300 Points
      Note: All students are to take the exams on the scheduled date and time.
   b.) Assignments: 100 points

If you have any problem with this grading system, please make an appointment to talk with the instructor immediately! NO LATE HOMEWORK WILL BE ACCEPTED. Students with unexcused absences will NOT be able to make-up exams or homework! A grade of ZERO (0) will be assigned to missing exams or homework! Students are required to provide documentations for legal absence before any make-ups.

Important Dates and Notes:
1. **Wednesday, January 13, 2016 ~ Thursday, January 14, 2016** is the Drop/Add period. Students can make schedule adjustment without receiving a ‘W’ grade for each class dropped. Students may make final schedule adjustments by **5:00PM on Thursday, January 14, 2016**.

2. **Monday, February 15, 2016** is the last day to apply for Spring 2016 graduation, and Summer/Fall 2016 graduation without late fee.

3. Students will NOT automatically be dropped from classes. Students who choose to drop from this class must do so via LEONET by the university deadline of **Friday, March 11, 2016 before 12:30PM**. It is also the deadline to resign from the university.

4. The time and location of the final exam for this class will be announced during the last week of lecture.

5. **Friday, May 6, 2016** is the last day of classes.

6. **Friday, May 20, 2016** is the deadline to return rental textbook without fine. Student accounts will be charged for any rental books not returned by **12:30PM on Friday May 20, 2016**.

7. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Disability Services, War Memorial Student Union 1304. No accommodations will be granted without documentation from the Office of Disability Services.

8. Student behavior/Classroom decorum: "Free discussion, inquiry, and expression are encouraged in this class. Classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones' or other electronic devices;
repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is crossing the civility line." In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required." Otherwise, ALL PAGERS, BEEPERS, CELLULAR TELEPHONES AND OTHER ELECTRONIC DEVICES ARE TO BE TURNED OFF OR TURNED TO SILENT MODE BEFORE YOU ENTER THE CLASSROOM. TEXT MESSAGING DURING THE LECTURE IS NOT ALLOWED. Classroom behavior that is deemed inappropriate and cannot be resolved by the student and the faculty member may be referred to the Office of Judicial Affairs for administrative or disciplinary review as per the Code of Student Conduct which may be found at http://www.selu.edu/admin/stu_affairs/handbook/.

9. Academic Integrity: Students should note that repercussions of academic integrity are discussed in the university catalogue. “Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action”.

10. The students Southeastern Louisiana University e-mail address MUST be used for all e-mail communication between students and faculty/administration/staff. Students are encouraged to check their Southeastern e-mail frequently for important communications from the university.

11. University policy states that the lab is not a place for children. Students are not to bring their children to the lab.

Course Requirements:
1. Adherence to departmental policies and procedures, which you were provided.

2. Regular and punctual class attendance. Students who have unexcused absences will receive the grade of zero (0) for all tests, quizzes, and/or lab experiments missed. When any student receives unexcused absences (e.g., ten percent of the total classes) in any class prior to the published withdrawal date, the instructor may withdraw the student with a grade of W.

Course Details:
1. This course is the first part of the Capstone Design Project. It covers engineering ethics, teamwork and leadership, problem solving, oral and written technical communication, project management, and the integration of ET with real-world examples such as case studies in computer systems, robots, and mechatronics. All team projects must contain specific deliverables and assessment for each participating student's task(s).

2. All projects are subject to instructor’s approval.

3. This course, among other things, requires some presentations in the presence of an
audience. At minimum, it requires a proposal presentation and a final presentation. The
days that this is possible, particularly for potential industrial visiting attendees, are
usually Fridays and students will be required to attend and make presentations during
those times. One such firm date is the Friday of the last week of classes. For other
presentations, advance notice will be given so that students can make necessary
arrangements. An advisor pertinent to the project must be identified by the student and
approved by the instructor. Weekly meetings with the advisor are required.

4. If any lab assignment is given for the class: Please come to the lab prepared to build
the circuits. This means that you must have a legible design worked out before you
come to the lab. If you do not have a design when you come to the lab to build a circuit,
you may not be permitted to enter the lab. Do not attempt to circumvent this rule by
scribbling something that looks like a design 5 minutes before the lab time.

Course Outline:
- Objectives of engineering design
- The stages of engineering design process
- Problem solving: definition, constraints, specifications and functions, and solutions in
design space
- Prototypes, Models, and Computer simulations
- Intellectual Property – Notes
- Business principles - Notes

A formal proposal must be produced by the second week of classes and submitted on
Moodle. The proposal and corresponding presentation materials must be reviewed and
approved by the advisor before submission. A progress report is required by April 8. A
final report and presentation is required by the last day of classes. All submitted
materials must be approved by the advisor. A business proposal is required by April
22nd.

General Guidelines for Success
1. Come to class on time every scheduled class meeting with materials needed to
facilitate learning, such as the textbook, notebooks, pencil and calculator.
2. Take good notes.
3. The Moodle system will be used extensively in this course, monitor it often for
course announcements, assignments, the syllabus and many external links for
use in addition to the course textbooks.
4. Read and understand the assigned material from the text, if the material is not
understood ask questions in class so the whole class can hear the answer.
5. Complete homework and submit homework when it is due, not later.
6. Turn cell phones to “silent” during class.
7. The use of tobacco, eating or drinking is not allowed in the classroom or lab.
8. All students are expected to be appropriately attired; be respectful to the
environment and your fellow students and be mindful of wearable items that
may get caught in equipment, or cause electrical hazards, or not allow you to react swiftly in case of an emergency.


10. Start studying at least 3 days before the test. The day/night before the quiz should be a review day. An appropriate time of study for a quiz is 6 to 9 hours.

11. For a 3 hour class an average student needs to spend about 9 hours outside of class per week to get an A or B.

12. In order to pass this class you need to master certain design topics. It is the instructor’s job to present the material and coach you through the learning experience. It is the students’ responsibility to work hard, learn, and ask for assistance when it is needed.

BIBLIOGRAPHY