STATE UNIVERSITY OF NEW YORK, COLLEGE AT NEW PALTZ
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

EGG101 – INTRODUCTION TO ENGINEERING SCIENCE – FALL 2011
COURSE SYLLABUS

INSTRUCTOR: MICHAEL OTIS
OFFICE: REH 201
OFFICE HOURS: Monday   10:50am – 11:50am
                Tuesday   10:50am – 11:50am
                Thursday   10:50am – 11:50am
                Friday   10:50am – 11:50am
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Blackboard: https://blackboard.newpaltz.edu/webapps/portal/frameset.jsp

DESIGNATION:
Course is required for Electrical/Computer Engineering Undergraduate Majors.

COURSE DESCRIPTION:
This course will provide students with a broad overview of the driving technologies
associated with electrical and computer engineering, more specifically with the computer,
information, and resource revolutions. The instructors approach to this course will be:
"how things work" and "what's inside the box" and will be project-based.

PRE-REQUISITE:
College Math and genuine interest in engineering.

TEXTBOOK:
None. Note taking, Powerpoint slides, and handouts will be used for the delivery of the
subject matter.

STUDENT LEARNING OUTCOMES:
1. Students will learn the fundamentals of energy through experimentation with solar
    photovoltaics.
2. Students will learn the fundamentals of programming using microprocessor-based
    robotics.
3. Students will learn the fundamentals of Computer Aided Design (CAD) using
    industry standard CAD tools.

GRADING:
- Exam 1   20%
- Exam 2   20%
- Final Exam   20%
- Projects   40%

<u>COURSE OUTLINE:</u>
1. **Computer Engineering Fundamentals:**
   a. Microprocessor Systems
   b. Programming
   c. Robotics

2. **Electrical Engineering Fundamentals:**
   a. Electronics
   b. Control Systems
   c. Communication Systems
   d. Semiconductor Processes
   e. Energy Systems

3. **Computer Aided Design**
   a. Electrical CAD – Cadence
      1. Schematic Capture
      2. Printed Circuit Board Design
   b. Mechanical CAD – Solidworks
      1. 2-Dimensional
      2. 3-Dimensional

<u>COURSE PROJECTS</u>:
1. Solar PV Characterization and Application
2. Microprocessor-Based Robotics
3. Computer Aided Design

<u>POLICIES</u>:
- **ADA Policy:** If you have documented disabilities, inform the instructor privately during the first week of class and make proper arrangements. Refer to the Student Handbook for SUNY New Paltz policies.
- **Attendance:** You are expected to attend lectures on a regular basis. In case of absence, it is your responsibility to obtain notes from your fellow classmates, not from the instructor.
- **Missed Coursework:** All coursework is your responsibility. There are no excuses for handing in coursework late. Coursework will be graded as late if not handed in on the due time/date, which is at the beginning of the class period on the due date. Coursework will be penalized one letter grade each day it is late.
- **Rescheduling:** There is no rescheduling unless emergencies arise related to medical or family matters. Rescheduling is contingent on the student presenting both documentation describing the reason(s) for the absence and contact information for the person providing the document(s).
- **Plagiarism:** Submitting material that is not your own work, including internet materials, is considered plagiarism, and will result in a failing mark and a report to the department chair and dean. Quoted material must be correctly cited. Refer to the Student Handbook section on Academic Integrity for a full discussion of policies on plagiarism, cheating, and forgery.