SUNY NEW PALTZ  
Department of Electrical and Computer Engineering  

47101 Introduction to Engineering Science - 3 credits  
Fall 2006 Semester  

COURSE SYLLABUS  

1. GENERAL INFORMATION  

Professor: Michael Otis  
Office: REH 201  
Voice mail: (845) 257-3827, Fax: (845) 257-3730  
E-mail: otism@engr.newpaltz.edu  
URL: http://www.engr.newpaltz.edu/~otism  
Office hours:  
- Monday  4:00-5:00  
- Tuesday  4:00-5:00  
- Wednesday  4:00-5:00  
- Thursday  4:00-5:00  

Textbook: Electronics Toolkit (available at College bookstore.)  
Lectures are supplemented by Powerpoint Slides, Handouts, and Lecture Notes.  

2. COURSE OBJECTIVES:  

(i) Students are introduced to the engineering profession and the role engineering plays in today's society.  
(ii) Students learn problem-solving and troubleshooting techniques of basic resistive AC/DC circuits and fundamental electronics with applications.  
(iii) Students learn Schematic Capture and Computer Simulation to reinforce analysis techniques.  
(iv) Students are introduced to lab equipment and instrumentation and apply theoretical concepts with hands-on (laboratory) team experiences.  

3. COURSE CONTENTS  

1) Introduction to Engineering:  
   a) What Does an Engineer Do?  
   b) Engineering Professionalism  
   c) Engineering Ethics
2) Electrical Engineering Fundamentals:
   a) Direct Current / Alternating Current
   b) Signal Processing
   c) Basic Circuit Elements
   d) Circuit Analysis with EWB
   e) Troubleshooting Techniques

3) Laboratory (Hands-on) Experiences:
   a) AC to DC Converter
   b) DC Voltage Divider (Loaded)
   c) AC Voltage Divider and Instrumentation
   d) Light Sensitive Alarm

4. SCHEDULE FOR EXAMINATIONS, LABORATORIES, AND HOMEWORKS

   There will be two examinations and one final examination in this course. All examination dates will be announced prior to examination.

   Four laboratories (work in groups) will be assigned throughout the semester. A formal report should be generated (one per group) and handed in one week from date of lab completion.

   Homework’s will be assigned throughout the semester. Homework should be handed in one week from date of assignment.

5. GRADING POLICY

5.1. Grade Distribution

|                |     
|----------------|-----|
| Laboratories:  | 40% |
| Exam 1:        | 20% |
| Exam 2:        | 20% |
| Final Exam:    | 20% |
| Total:         | 100%|

5.2. Class Attendance

Students are strongly encouraged to attend all the lectures. In case if you are unable to attend a particular lecture, please make sure that you copy the notes from a student that attended the lecture.