COURSE OUTLINE

ELEC 477 – Capstone Project

Prepared By: Stephen E. Frempong
A. **TITLE**: Capstone Project

B. **COURSE NUMBER**: ELEC 477

C. **CREDIT HOURS**: 3

D. **WRITING INTENSIVE COURSE**: YES

E. **WEEKS PER SEMESTER**: 15

F. **SEMESTER OFFERED**: SPRING

G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY**: Independent Project

H. **CATALOG DESCRIPTION**: A learning experience by allowing students to propose, design and implement a project. This could be a study of a problem and solution of specific equipment, new product design, improvement of an existing product (re-engineering). All projects must be approved by course faculty or capstone committee. As part of this course, all students must take the exit examination before graduation.

I. **PRE-REQUISITES/CO-COURSES**: Completion of seven semester coursework or permission of program director.

J. **GOALS (STUDENT LEARNING OUTCOMES)**

**Institutional Student Learning Objectives (SLO)**

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<thead>
<tr>
<th>Course Objectives / ABET (SLO)</th>
<th>Institutional (SLO)</th>
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<tr>
<td>An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities.</td>
<td>3. Professional Competence</td>
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<td>An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.</td>
<td>2. Critical Thinking</td>
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<td>An ability to function effectively as a member or leader on a technical team.</td>
<td>1. Communication</td>
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<tr>
<td>An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.</td>
<td>2. Critical Thinking 1. Communication</td>
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K. **TEXTS**: N/A
L. **EQUIPMENT:** EET laboratory is used. Students are responsible for materials or components that may be needed to complete an approved project.

M. **GRADING METHOD:** A-F

N. **MEASUREMENT CRITERIA/METHODS:** Project level of difficulty, Final report, and Presentation skills.

O. **DETAILED TOPICAL OUTLINE:**

1. Project Proposal
   a. Team or individual
   b. Must meet a standard established by faculty
   c. Must be submitted within the first two weeks of classes
   d. One week extra time given to rejected proposal for resubmission

2. Project Update
   a. Individual or team project updates every month

3. Project Report
   a. Must follow standard as outlined in course syllabus
   b. Must include design, data, and diagrams
   c. Solution of the problem

4. Presentation
   a. Individual/group project PowerPoint presentation
   b. Public speaking/dress code
   c. Project demonstration
   d. Q&A from students, faculty and staff