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)**

1. Communication  
2. Critical Thinking  
3. Professional Competence

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<tr>
<th>Course Objectives / ABET (SLO)</th>
<th>Institutional (SLO)</th>
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<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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| 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. | 2. Critical Thinking  
1. Communication |

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