Miami Dade College

Course Competencies Template - Form 112

GENERAL INFORMATION	
Name: Diane King	Phone #: 77021
Course Prefix/Number: EET 4166C	Course Title: Senior Design 2
Number of Credits: 3	
Degree Type	☐ B.A. ☐ B.S. ☒ B.A.S ☐ A.A. ☐ A.S. ☐ A.A.S. ☐ C.C.C. ☐ A.T.C. ☐ V.C.C
Date Submitted/Revised: 02-26-2008	Effective Year/Term: 2009-2
☒ New Course Competency ☐ Revised Course Competency	
Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): ☐ Yes ☒ No	
The above course links to the following Learning Outcomes: ☒ Communication ☐ Social Responsibility ☒ Numbers / Data ☐ Ethical Issues ☒ Critical thinking ☒ Computer / Technology Usage ☐ Information Literacy ☐ Aesthetic / Creative Activities ☐ Cultural / Global Perspective ☐ Environmental Responsibility	
Course Description (limit to 50 words or less, **must correspond with course description on Form 102**): This is a capstone course for students completing the course of study for the baccalaureate in electronics engineering technology in which students demonstrate their knowledge and skills applicable to the degree program's core competencies and outcomes. The course is a project-based experience in which students apply all of the skills they have acquired to analyze, design, simulate, synthesize, and test a complete electronics/electrical system. Prerequisite: EET4938C; Department approval required. Laboratory fee. (2 hr. lecture, 2 hr. lab)	
Prerequisite(s): EET4938C; Department approval required.	Co requisite(s):

Course Competencies:

Competency 1: The student will demonstrate the ability to analyze system requirements by:

1. Identifying system goals.
2. Outlining system performance requirements.
3. Defining project specifications.
4. Performing relevant theoretical analysis.
5. Evaluating ethical issues related to the implementation and use of the system.
6. Assessing the environmental impact of the system.

Competency 2: The student will demonstrate the ability to design and simulate an electronic/electrical system by:

1. Creating an appropriate block diagram of system.
2. Defining each block as a schematic representation.
3. Translating schematic representations into simulation models.
4. Identifying appropriate systems, components, materials necessary to meet the system requirements.
5. Defining printed circuit board (PCB) layouts for the system.

Competency 3: The student will demonstrate the ability to synthesize and test the final electronics/electrical system by:

1. Assembling components on PCB(s).
2. Building additional structures to house the system(s).
3. Integrating additional parts (motors, transducers, sensors, etc.) to complete the system(s).
4. Verifying the system to ensure its functionality as specified in the project design.
5. Reevaluating system performance and modifying as needed to satisfy project requirements.

Competency 4: The student will demonstrate the ability to document and present final system implementation by:

1. Presenting a system demonstration with fellow team members in a peer review environment consisting of faculty and other student teams.
2. Documenting the project life cycle to include analysis, design, synthesis, and testing of the project.