Minnesota State College Southeast

COMC 2999: Computer Engineering Technology Capstone

A. COURSE DESCRIPTION

Credits: 2
Lecture Hours/Week: 1
Lab Hours/Week: 2
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

Students will devise capstone projects integrating their coursework in electronics, programming, automation, and system integration. Projects will be vetted through their academic advisor and will be presented to the class at the end of the semester. The course will require specification of design requirements, outline integration of technical solutions, and map how the project relates to both industry and their program curriculum. Completion of COMC 2754 will meet the completion requirements for COMC 2756. (2 credits: 1 lecture, 1 lab) (2 credits: 1 lecture/1 lab)

B. COURSE EFFECTIVE DATES: 02/22/2018 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
D. LEARNING OUTCOMES (General)
   1. Analyze business problems
   2. Participate in project planning sessions
   3. Write user stories/use cases
   4. Identify user requirements
   5. Plan solution design
   6. Communicate/collaborate with team members (if necessary)
   7. Estimate time lines and cost
   8. Define processing requirements
   9. Diagram proposed solution
  10. Write program specifications
  11. Design system test plan
  12. Develop implementation plan
  13. Analyze program specifications
  14. Analyze hardware specification
  15. Analyze system integration specifications
  16. Diagram program flow
  17. Access technical manuals
  18. Prioritize system features
  19. Design system interactions
  20. Prepare operation documentation
  21. Prepare user documentation
  22. Create project source documents
  23. Debug engineered system
  24. Perform code review
  25. Perform hardware review
  26. Create application documentation
  27. Submit progress reports
  28. Use iterative development process
  29. Demonstrate professional attitude

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted