Credits and Contact Hours for CSC 480: 3 Credits, Contact Hours: 42 (1 contact hour = 50 mins)
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Instructor: Dr. Vinitha Hannah Subburaj


Course description:

a. Catalog description: Senior Software Engineering Project (SSEP) I and II offered is a sequential course with SSEP I offered during the fall semester and SSEP II offered during the corresponding spring semester. The main objective of these two courses is to prepare students entering into industry with the entire software development process through a hands-on experience. As a part of these courses, students will complete a significant software project. The main goal of the project development experience is to let the students strive to achieve Customer Satisfaction and focus on Software Reliability. In other words making sure the requirements specification document reflects the needs of the customer and the product delivered at the end of this course confirms that the listed requirements are met.

b. Prerequisite for CSC 480: CSC-311 and CSC-335
   Prerequisite for CSC 481: CSC-480

c. Required/Elective:
   a. Computer Science – Not Required
   b. Software Engineering – Required

Specific Goals of Course:

a. Specific outcomes of instruction

After completion of the course, students will be able to

i. Students will select an industry software project and form teams of size three or above based on their selected project

ii. Students will be required to follow a formal software development approach to come up with a solution to the problem statement

iii. Students will be required to develop a thorough requirements specification document for the software to be developed using industry standards

iv. Students will be required to translate software requirements to design, design to code, and then test the software system based on appropriate software engineering methodologies

v. Students will be required to develop a final project report and a final presentation with a strong emphasize on writing skills and oral presentation skills which form the basic platform for students entering into software industries

b. CAC Criterion 3 outcomes addressed by the course: None
c. EAC Criterion 3 outcomes addressed by the course:

(a) An ability to apply knowledge of mathematics, science, and engineering
(b) An ability to design and conduct experiments, as well as to analyze and interpret data
(c) An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
(d) An ability to function on multidisciplinary teams
(e) An ability to identify, formulate, and solve engineering problems
(f) An understanding of professional and ethical responsibility
(g) An ability to communicate effectively
(h) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
(i) A recognition of the need for, and an ability to engage in life-long learning
(j) A knowledge of contemporary issues
(k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Brief list of topics to be covered:

- Software Development Process Model
- Feasibility Analysis Study
- Software Management Plan
- Software Requirements Engineering
- Software Design and Implementation
- Software Testing
- Software Maintenance