CSCI 3350  
Software Engineering II

Credit Hours: 3
Contact Hours: 4

Course Coordinator: Suzanne Smith

Text(s):  

*Software Engineering: Modern Approaches*, Braude and Bernstein, 2011 (Required)

Catalog Description:

Software development as an engineering discipline with emphasis on detailed design, implementation, testing, maintenance, project management, verification and validation, configuration management, and software quality assurance. Communications (written and oral), legal, professional ethical issues, participation on team projects, and use of automated tools are integral.

Prerequisite(s): CSCI 3250

CS: REQUIRED
IS: REQUIRED
IT: REQUIRED

Course Outcomes:

Apply an appropriate software lifecycle model to given scenario, - ETSU Outcomes 4b, 5a, CS-2, IS1, IT-1a, IT-1b; ABET Outcomes b, c, CS-k, i, IS-j, IT-k

Demonstrate an understanding of processes involved in the creation, evaluation, and use of project deliverables in each phase of the software development lifecycle with a focus on detailed design, implementation, testing, and maintenance, - ETSU Outcomes 4b, 5a, CS-2, IS-2, IT-1a, IT-3; ABET Outcomes CS-k, i, IS-j, IT-k

Demonstrate the ability to participate on project teams in various roles, - ETSU Outcomes 1c, 4b, 5a; ABET Outcome d

Demonstrate an understanding of the measurement of software products and processes, - ETSU Outcomes 4b, 5c, IS-2; ABET Outcomes I, IT-j, IT-m

Demonstrate an understanding of project scheduling and estimation, - ETSU Outcomes 4b, 5c, CS-2, IS-2; ABET Outcomes i, IT-n

Demonstrate an understanding of the controlling disciplines used to assess and improve software quality, including configuration management, quality assurance, verification, and validation, - ETSU Outcomes 4b, 5c, CS-2, IS-2; ABET Outcomes i, IT-j, IT-m

Write and orally communicate about software engineering. - ETSU Outcomes 1a, 1b; ABET Outcomes f
Major Topics:

- Review of Software Engineering I topics
- Requirements gathering and specification methods
- Structured analysis
- Object-oriented implementation
- Object-oriented testing
- Software maintenance
- Planning and estimation
- Configuration management
- Quality assurance methods
- Verification and validation
- Walkthroughs and inspections
- Software product metrics
- Software process metrics.