CSCI 3250  

**Software Engineering I**

**Credit Hours:** 3  
**Contact Hours:** 4  
**Course Coordinator:** Suzanne Smith

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

**Catalog Description:**

An introduction to software systems development as an engineering discipline. All phases of the software development life cycle are examined, with particular emphasis on requirements analysis, requirements specification, and preliminary design. Participation on realistic team projects, use of automated tools, written and oral communication skills, exposure to legal, professional, and ethical issues are stressed.

**Prerequisite(s):**  
CSCI 2910 or CSCI 2230 (*CSCI 3230*)

**CS:**  REQUIRED  
**IS:**  REQUIRED  
**IT:**  REQUIRED

**Course Outcomes:**

- Demonstrate an understanding of the software life cycle and life cycle models, - ETSU Outcomes 4b, 5a, CS-2, IS-1; ABET Outcomes b, c
- 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 analysis and design, - ETSU Outcomes 4b, 5a, CS-2, IS-2; ABET Outcomes CS-k, i, IS-j, IT-k
- Demonstrate the ability to participate on project teams in multiple roles in the various activities of the software development life cycle, - ETSU Outcomes 1c, 4b, 5a; ABET Outcome d
- Demonstrate an awareness of legal, professional, and ethical issues in software engineering, - ETSU Outcome 2a; ABET Outcomes e.1, e.2, g
- Use a Computer-Assisted Software Engineering (CASE) tool to create analysis and design models, - ETSU Outcomes 4b, 5c; ABET Outcome i
- And write and orally communicate about software engineering, - ETSU Outcomes 1a, 1b; ABET Outcome f
Major Topics:

Definition and scope of software engineering
Overview of the software process
Phases of the software life cycle
Software life cycle models
Requirements analysis and specification
Object-oriented analysis
Object-oriented design
Working in teams
Team organization models
Testing principles
Ethical and professional issues.