

SWE 3643: Software Testing & Quality Assurance

3 Credit Hours

Prerequisite: SWE 3313 or CPE 3000

This course will show how software quality assurance and configuration management are performed and how software process improvement is maintained in order to assure the highest possible quality. Topics include software process metrics and their use in QA, testing approaches, methods and techniques. Development of QA plans, reviews, inspections and audits will be done.

SWE 3683: Embedded Systems Analysis and Design

3 Credit Hours

Prerequisite: CS 3305

The analysis and design course focuses on using modern methods, techniques, and tools for specification and design of embedded systems. Topics include analytical methods such as RMA, development methods such as HOOD, and notations like UML, Petri-nets, etc. are covered. Performance evaluation based on modeling and simulation techniques is also covered. This is a project based course.

SWE 4324: User-Centered Design

3 Credit Hours

Prerequisite: SWE 3313

This course presents the fundamental knowledge, processes, skills, and practices leading to the user-centered design (UCD) of (computer) systems and applications. UCD is not limited to the design of software systems but applies to the plan and development of any objects. This course will define the important concepts in UCD, cognition and its relationship with UCD, and two views of human-centered design. Usability engineering techniques are covered leading to improved system effectiveness in supporting use of computers, user learning, diversity in interaction styles, and individual versus group work.

SWE 4490: Special Topics

3 Credit Hours

This course offers advanced topics in Software Engineering selected by the Department. The course covers special topics at the senior level that are not covered in the regular course offerings.