

**CENTER FOR APPLIED INFORMATION TECHNOLOGY
TOWSON UNIVERSITY**

AIT 624: Software Engineering Fundamentals

Credit Hours: 3

Prerequisite: AIT 610

Course Description:

The course deals with key factors in software engineering such as principles, models, methodologies and techniques for the requirement acquisition, systematic planning, analysis and design, modularity and architecture, testing, maintenance, evolution and reuse of large and complex software that help make quality software within given time. We will discuss how to make software products adaptable to continuously changing requirements and environment, in an economic, competitive and quality-assuring manner.

Learning Objectives:

1. Understand lifecycle models of software development project
2. Understand software development processes
3. Collect and analyze user requirements and convert into software requirement specifications
4. Use various design and software specification methodologies
5. Understand software testing and be able to write test cases according to the specifications
6. Understand maintenance and reuse processes

Suggested Textbook:

1. Sommerville, I., *Software Engineering*, Eighth edition, Addison-Wesley