

MILITARY COLLEGE OF SIGNALS
Department of Computer Software Engineering

Course Code: CSE-478

Course Title: Software Requirements Engineering

Instructor: Asst. Prof. Dr. Arif Raza

Credit Hours: 3+0

Pre Requisite: CSE-271 Software Engineering

Outline:

This course is intended to teach basic principles and importance of requirements engineering. Requirements types, development process and different requirements activities will be discussed. The course covers different modeling techniques, along with how to develop informal requirement specification document. The course also discusses IEEE recommended practice for software requirements specifications. Establishing requirements baselines, performing requirements traceability, and managing requirements changes will also be taught.

Objectives:

- To comprehend the role of requirements engineering in software life cycle.
- To compare and contrast varied approaches to requirements modeling.
- To gather the requirements necessary to develop the specifications for a client's software system.
- To develop an informal requirements specification using a set of requirements.
- To model, prototype, and specify requirements for a software system.

Contents:

- Introduction to Requirements Engineering
- Definition and Importance of Requirements
- Types of Requirements
- Problem Domain and the System/Software-to-be
- Requirements Engineering: Main Activities
- Requirements Inception
- Requirements Elicitation
- Requirements Analysis and Specification
- Requirements Documentation and validation
- Non-Functional Requirements
- Software maturity and maturity models
- Requirements Management

Recommended Books:

1. Karl E. Wiegers, Software Requirements, Second Edition, Microsoft Press 2003.
2. Bray, Ian K.: An Introduction to Requirements Engineering, Addison-Wesley, 2002
3. Elizabeth Hull, Ken Jackson, Jeremy Dick, Requirements Engineering, Springer, 2005

Evaluation Criteria:

- Quizzes 10%
- Project / Assignments 10%
- Midterm Exam 30%
- Final Exam 50%

Quiz Policy:

- Quizzes will be unannounced.
- There will be a minimum of 4 quizzes.

Attendance Policy:

- Minimum 75% attendance is compulsory; failing to fulfill which, will automatically trigger an 'F' grade in the course.
Attendance may be marked any time during the lecture; any missing student would be marked absent.

Assignments Policy:

- Late submission of assignment will be penalized @ 20% per day up to a maximum of two days.
- Copying will not be tolerated and will be dealt with very seriously. You are advised to do and submit your own work.