

# MC426: Software Engineering

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**Prerequisite:** MC302

**Description:**

Software engineering paradigms. Data gathering/elicitation. Techniques and tools for user and system requirements specification. Analysis methods and information systems project. Information systems implementation.

**Programme:**

1. Introduction
  - a. Basic concepts
  - b. Software engineering paradigms
  - c. The importance of user requirements specification
  - d. The software project's role in developing systems
  - e. The value of testing in software quality
2. The early development of a system
  - a. User requirements specification
  - b. Methods for user requirements analysis
3. Systems project
  - a. Key aspects: abstraction, refinement, modularity, architecture, control hierarchy, data structure, information hiding
  - b. Environment design, interfaces design, modules design, data design and real-time systems project
  - c. Methods for systems project
4. Systems implementation
  - a. Programming languages
  - b. Database management systems
  - c. Utilities/tools
5. Management and control aspects

**Recommended Literature:**

- I. Pressman, Roger S. , Engenharia de Software, Makron Books, 1995