

CS205	Software Engineering	L	T	P
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Introduction to Software Engineering: Definition, Software development and life-cycle models, CMM, Software Quality, role of metrics and measurement.

Requirements Analysis and Specification: SRS Building Process, Specification Languages, Validation of SRS, metrics, monitoring and control, Object Oriented analysis.

Software Project Planning: Software Cost Estimation Techniques, Project Scheduling & Tracking, Project Team Standards, software configuration management.

Software Architecture: Role of Software Architecture, Architecture Views, Component and Connector View, Architecture Styles for C&C View, Architecture Evaluation.

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Software Design and Implementation: Design Concepts and Notations, Functional & Object Oriented Design Concepts, Design Strategies, Design specification and verification, Metrics, Design Translation Process.

Software Testing and Reliability: Strategies & Techniques, Debugging, Software Maintenance, Software Reliability and Availability Models, Software Reengineering, Cleanroom Approach, Software Reuse. Introduction to IEEE Standards, Case Studies.

Suggested Readings:

1. P. Jalote, An Integrated Approach to Software Engineering, IIIrd Edition, Narosa Publishing House.
2. R. S. Pressman, Software Engineering: A Practitioner's approach, McGraw-Hill.
3. I. Sommerville, Software Engineering: Pearson Education.
4. C. Ghezzi, M. Jazayeri, D. Mandrioli, Fundamentals of Software Engineering, PHI.
5. R. Mall, Fundamentals of Software Engineering, PHI.