I YEAR – I SEMESTER
COURSE CODE: 7MCE1E3

ELECTIVE COURSE-I(C)–SOFTWARE ENGINEERING

Unit I

Introduction to Software Engineering – The Evolving Role Of Software – Software – The Changing Nature Of Software – Legacy Software – **Process Models**: The Waterfall Model - Incremental Process Models - Evolutionary Process Models - Specialized Process Models.

Unit II

Requirements Engineering: Requirements Engineering Tasks – Initiating the Requirements Engineering Process – Eliciting Requirements - Developing Use-Cases.

Unit III

Estimation : Observations Of Estimation – The Project Planning Process – Software Scope and Feasibility – Resources – Software Project Estimation – Decomposition Techniques – Empirical Estimation Models – Estimation for Object-Oriented Projects.

Unit IV

Testing Strategies - Test Strategies for Conventional Software – Validation Testing – System Testing – **Testing Tactics :** Software Testing Fundamentals – Black-Box and White-Box Testing – White-Box Testing – Basis Path Testing - Control Structure Testing – Black-Box Testing.

Unit V

Metrics For Process And Projects : Metrics in the Process and Project Domains – Software Measurement – Metrics for Software Quality – Integrating Metrics Within the Software Process **– Component Based Development :** Engineering Of Component-Based Systems – The CBSE Process – Domain Engineering – Component-Based Development – Classifying and Retrieving Components – Economical of CBSE.

Text Book:

1. Roger S. Pressman, "Software Engineering: A Practitioner's Approach", Sixth Edition, 2005 McGraw Hill International Edition.

Book for Reference:

1. Waman S Jawadekar, "Software Engineering Principles and Practices", TMG publishing Company Ltd, New Delhi, 2005.

♣♣♣♣♣♣♣♣♣♣