

IV YEAR SEM-I B.Tech CSE	ELECTIVE	L	T	P	C
Code: CS4505	Software Reliability Engineering	2	2	0	4

UNIT-1

Introduction to Software Reliability, Error, Fault and failure, Reliability Theoretical Concepts and Notations, Metrics, Important Probability Distributions, Basic statistics.

UNIT-2

Elements of Software Reliability Modeling, Classification of the Existing Models,

UNIT-3

Deterministic models, Data Based Software Reliability Models

UNIT-4

Metric Based Software Reliability Models, Architecture Based Software Reliability Models

Unit-5

Operational Profile

UNIT-6

Acceptance Testing and Model Selection Criteria, Cost Models and Determination of Optimal Release Time

Text Books:

1. [Hoang Pham](#), System Software Reliability, (Springer Series in Reliability Engineering)
2. Mim. Xie, Software Reliability Modeling, World Scientific
3. J.D Musa, Software Reliability; Measurement, Prediction, Application, TMH
4. A.K Pandey and N K Goyal, Early Software Reliability Prediction- Studies in Fuzziness and Soft Computing, Springer