## IT9111 SOFTWARE ENGINEERING METHODOLOGIES

LTPC

3003

#### UNIT I SOFTWARE LIFE CYCLE

12

Scope of Software Engineering – Historical, Economic and Maintenance Aspects – Software Process – Software Life Cycle Models – Tools.

UNIT II TESTING 7

Quality – Non-Execution based Testing – Execution based Testing – Testing versus Correctness Proofs – Testing Distributed and Real Time Software

# UNIT III OBJECT ORIENTATION

7

Modules - Objects - Reusability - Portability and Interoperability - Planning and Estimation

### UNIT IV ANALYSIS AND DESIGN

11

Requirements Phase – Specification Phase – Object Oriented Analysis Phase – Design Phase.

#### UNIT V IMPLEMENTATION AND INTEGRATION

8

Implementation Phase – Integration Phase – Maintenance Phase

TOTAL = 45

#### **TEXT BOOKS**

- 1. Stephen R Schach, "Classical and Object-Oriented Software Engineering With UML and C++", McGraw Hill, New Delhi, 2002.
- 2. Ivar Jacobson, "Object Oriented Software Engineering", Pearson Education, 1992

# **REFERENCES**

- 1. Roger S.Pressman, Software engineering- A practitioner's Approach, McGraw-Hill International Edition, Fifth Edition, 2001.
- 2. Ian Sommerville, Software engineering, Pearson education Asia, Sixth edition, 2000.
- 3. Pankaj Jalote- An Integrated Approach to Software Engineering, Springer Verlag, 1997
- 4. James F Peters and Witold Pedryez, "Software Engineering An Engineering Approach", John Wiley and Sons, New Delhi, 2000.
- 5. Ali Behforooz and Frederick J Hudson, "Software Engineering Fundamentals", Oxford University Press, New Delhi, 1996.