**IT-408 SOFTWARE PROJECT MANAGEMENT (ELECTIVE – III)**

**Internal Marks: 40 L T P**

**External Marks: 60 3 1 0**

**Total Marks: 100**

**PREREQUISITES: -**System Analysis and Design

**OBJECTIVES: -**. The course should seek to equip the student with a repertoire of

principles, tools and techniques and make him/her appreciate that software engineering is an exercise in making compromises. .

**COURSE CONTENTS**

**1. The software Engineering Problem [5%]**

The software engineering problem and software products, All of the software

engineering activities, The concept of software product like cycle model

**2. Software evolution [5%]**

The concept of a software like cycle, The various forms of a software productform

initial conception through development and operation to retirement,

Controlling activities and disciplines to support evolution, Planned and unplanned

events that affect software evolution, The role changing technology.

**3. Technical Communication [5%]**

Fundamentals of technical communication Oral and Written communications,

preparing oral presentation and supporting material, Software project

documentation of all kinds, ISO/Other, e.g. IEEE .

**4. Software Configuration management [15%]**

Concept of configuration management, Its role in controlling software evolution,

Maintaining Product integrity, Changing control and version control,

Organization structure for configuration

**5. Software Quality Assurance [20%]**

Software quality assurance as a controlling discipline, Organizational structures

for quality assurance, Independent verification and validation teams, Test and

evaluation teams , Software technical reviews , Software quality assurance plans :

ISO 9000, ANSI/IEEE

**6. Standards [15%]**

Introduction to standards - ISO 9002 and ISO 9003 - Quality system

development, SO 9000 standard for software, Understanding ISO 900-3 clauses,

SEI model - capability Maturity model - Five levels Bootstrap method,

Implementing ISO 9000, Analysis the Quality system, Documenting & Auditing

quality system, ISO 9000 registration process & Accreditation System, Total

Quality Management

**7. Software Project organizational and management issues [20%]**

Staffing - development, organizations, quality assurance teams , project planning

- choice of process model, project scheduling and milestones, resource allocation

**8. Software project economics [15%]**

Cost estimation, risk analysis for software projects, factors that affect cost.

**REFERENCES**

1. S/W Engineering - Somerville (Addison Wesley) .

2. S/W Engineering-Pressmen.

3. S/W Engineering -Jalota