HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN

MCA SEM - V
[In Force June 2006]
MCA EL - 5 : Project Management Practices & Evaluation

Teaching Scheme (Per Week)		Examination Scheme					
		INTERNAL		EXTERNAL		TOTAL	
Th. (hours)	Pr. (hours)	Th. (hours)	Pr. (hours)	Th. (hours)	Pr. (hours)	Th. (hours)	Pr. (hours)
4	----	30	----	70	----	100	----

Unit - I
1. Introduction to Software Project Management :
Project, Software projects versus other types of project, Contract management and technical project management, Activities covered by software project management, Plans methods and methodologies, Some ways of categorizing software projects, management, Problems with software projects, Settings objectives, Stakeholders, The business case, Requirement specification, Management Control.
2. Step Wise : an overview of project management :
Select project, Identify project scope and objectives, Identify project infrastructure, Analyse project characteristics, Identify project products and activities, Estimate effort for each activity, Identify activity risks, Allocate resources, Review/publicize plan, Execute plan and lower levels of planning.
3. Project Evaluation :
Strategic assessment, Technical assessment, Cost-benefit analysis, Cash flow forecasting, Cost-benefit evaluation techniques, Risk-evaluation.
4. Selection of an appropriate project approach :
Choosing technologies, Technical plan contents list, Choice of process models, Structure versus speed of delivery, The waterfall model, The V-process model, The spiral model, Software prototyping, Other ways of categorizing prototypes, Controlling changes during prototyping, Incremental delivery, Dynamic systems development method, Extreme programming, Managing iterative processes, Selecting the most appropriate process model.

Unit - II
1. Software effort estimation :
Estimated done, Problems with over and under estimates, The basis for software estimating, Software effort estimation techniques, Expert judgement, Estimating by analogy, Albrecht function point analysis, Function point mark II, Object points, A procedural code-oriented approach, COCOMO : a parametric model.
2. Activity planning :
The objectives of activity planning, When to plan, Project schedules, projects and activities, Sequencing and scheduling activities, Network planning models, Formulating a network model. Adding the time dimension, The forward pass, The backward pass, Identifying the critical path, Activity float, Shortening the project duration, Identifying critical activities, Activity-on-arrow networks.
3. Risk Management :
The nature of risk, Types of risk, Managing risk, Hazard identification, Hazard analysis, Risk planning and control, Evaluating risks to the schedule.
4. Resource allocation:
The nature of resources, Identifying resource requirements, Scheduling resources, Creating critical paths, Counting the cost, Being specific, publishing the resource, Cost schedules, The scheduling sequence.
5. Monitoring and Control :

Creating the framework, Collecting the data, Visualizing progress, Cost monitoring, Earned value, Prioritizing monitoring, Getting the project back to target, Change control.

Unit - III

1. Managing contracts :

Types of contract, Stages in contract placement, Typical terms of a contract, Contract management, Acceptance.

2. Managing people and organizing teams :

Understanding behaviour, Organizational behaviour : a background, Selecting the right person for the job, Instruction in the best methods, Motivation, The Oldham-Hack man job characteristics model, Working in groups, Becoming a team, Decision making, Leadership, Organizational structures, Stress, Health and safely.

Unit - IV

1. Software quality :

The place of software quality in project planning, The importance of software quality, Defining software quality, ISO 9126, Practical software quality measures, Product versus process quality management, External standards, Techniques to help enhance software quality, Quality plans.

2. Small Project :

Some problems with student projects, Content of a project plan.

3. Programme Management :

Programme Management, varieties of Programme Management, Managing the allocation of resources within programmes, stratrgic Programme Management, Creating a program, The organization to support, Aids to Programme Management, Benefits management.

4. ISO 12207 : an overview

The ISO 12207 approach to software life- cycle data, The ISO 12207 approach to software life- cycle processes, The acquisition process, The supply process, The development process.

Reference / Text Books :

1. BOB Hughes and Mike Cotterell : Software Project Management, 3rd Ed., Tata McGraw-Hill.
2. Robert K.Wysocki : Effective Software Project Management, Wiley India Edition.
3. Walker Royce : Software Project Management - A Unified, Framework Pearson Education.
4. Joel Henny : Software Project Management - A Real-World Guide to Success, Pearson Education.

QUESTION PAPER SCHEME :

Section -I

Q-1 Objective Type Unit I & II   [11] Marks
Q-2 Unit - I OR Q-2 Unit - I   [12] Marks
Q-3 Unit - II OR Q-3 Unit - II   [12] Marks

Section - II

Q-4 Objective Type Unit III & IV   [11] Marks
Q-5 Unit III OR Q-5 Unit III   [12] Marks
Q-6 Unit IV OR Q-6 Unit IV   [12] Marks