ELE4117 ENGINEERING PROJECT MANAGEMENT

Hours per Semester				Weighted Total Mark	Weighted Exam Mark	Weighted Continuous Assessment Mark	Credit Units
LH	PH	TH	CH	WTM	WEM	WCM	CU
60	0	00	60	100	60	40	4

Rationale

This course discussed advanced concepts in power systems engineering including the recent research topics

Course Objectives

The course examines project management roles and environments, the project life cycle and various work planning, control & evaluation techniques used to achieve project objectives. The tools currently available to project managers should be discussed throughout the course.

Detailed Course Content:

Project Management Concepts: [6 Hours]

Characteristics of a project, the need for project management; roles of project managers in organizational environments; Systems development cycle; roles of systems analysis & systems management in project life cycle.

Project Organizational Structures: [6 Hours]

Describe the ways groups are organized into projects; the roles & responsibilities of project team members; relationship between project managers & line managers, especially in division of responsibility and authority.

Project Organizational Behaviors: [6 Hours]

Identify leadership styles of project managers; Techniques used to manage groups and individuals to increase project team effectiveness; sources of ethnic/corporate diversity that impact project team effectiveness.

Applied Project Planning: [8 Hours]

Statement of work (SOW) & decomposition of overall project goals; Using established tools and techniques, develop a work breakdown structure (WBS) required to achieve stated project objectives; produce a task-flow network and analyze the contingencies, interrelationships, and critical path(s) of the work elements; and produce a Gantt chart required to schedule completion of all work elements.

Resource Allocation: [6 Hours]

Analyze optimal labor utilization for cost effectiveness; schedule efficiency using a resource-loading chart.

Cost Estimating & Budgeting:

Develop cost estimates & budgets with cost accounts to plan project expenditures; cost summaries for tracking project expenditures to budgeted costs; cost forecasts to proactively control future planned expenditures.

Project Performance Measurement & Control: [6 Hours]

Concept of earned value performance measurement; Describe how project management information systems (PMIS) are used to monitor, evaluate, and control planned cost and schedule performance.

Project Evaluation and Termination: [7 Hours]

Describe the procedure for conducting periodic project performance evaluation audits; Explain how project managers must communicate audit results to customers and management in order to manage expectations; Describe how, as a result of project audits, project managers conduct trade-off analyses

of project performances versus cost and schedule constraints; Identify causes associated with project success and failure; Specify ways in which a project can be terminated upon completion

Method of Teaching /Delivery
The course will be taught by using lectures, tutorials and assignments.

Mode of Assessment
Assignments, tests and final examination. Their relative contributions to the final grade are :

Requirement	Percentage contribution
Course work (Assignments, tests)	40%
Final examination	60%
Total	100%