

**ASIAN INSTITUTE OF TECHNOLOGY
SCHOOL OF ENGINEERING AND TECHNOLOGY
Offshore Technology and Management**

**ELP 1.4: PROJECT MANAGEMENT PRACTICES FOR LEADERS 3(3-0)
Semester: JAN 2016**

Rationale: A disciplined project management process provides a project with a structure for execution. Team leaders are expected to deliver results, on time and on budget; the leader's use of project management processes reduces the risks associated with any project that is undertaken. Controlling the scope and managing change (variation) orders are some of the qualities that become essential for the project leader's successful completion of a project. This course addresses the need for professionals to understand the basics of project management and how to use project management as a tool to plan, execute and modify a project.

Catalogue Description: This course is designed to provide the participants with an understanding of project management principles, practices, and analysis, and how to use the results of analysis in making decisions. This course will teach how to effectively manage the different phases of an engineering or technical project. The participants will learn the project management framework of; initiation, planning, execution, modification, budgeting, control and closing a project. It focuses on leadership aspects of knowing the purpose and results of project management analysis, and then how to apply the results of project management analysis in executing a project.. The course also provides a pragmatic approach to overcoming project obstacles and how to incorporate the obstacles (and their solutions) into a project.

Pre-requisite:

1. ELP 1.1 : Developing Leadership Capability
2. ELP 1.2 : Communication Skill for Leaders

Course Outline:

1. Project management processes and principles within engineering or technical projects.- An Overview.
 - 1.1. Role of team leader in project management
 - 1.2. Project management theory and analysis. How to perform project management analysis
 - 1.3. Understanding project management.
 - 1.4. Concepts in project management.
2. Introduction to Project Management
 - 2.1. Definition of a project
 - 2.2. Why project management
 - 2.3. Project life cycle
 - 2.4. Organization structures (functional vs. matrix and borrowed resources)

- 2.5. Translating needs into requirements
3. Project definition
 - 3.1. Identification of project scope, life-cycle and project planning.
 - 3.2. Understanding and estimation of project times, costs and resources.
4. Project Management and Leadership
 - 4.1. Special demands on project managers
 - 4.2. Selecting the project manager and the project team
 - 4.3. Project communications
 - 4.4. Organizational structure (teams and team development)
 - 4.5. Characteristics of successful project management
 - 4.6. Management styles, leadership and motivation
 - 4.7. Procedure management
5. Project Execution and Control
 - 5.1. Project execution (configuration management)
 - 5.2. Project control (measuring work performance)
 - 5.3. Financial controls (activity based accounting)
6. Integrated cost and schedule control (Earned value) Leadership aspects of project management
 - 6.1. The use of project management in organizational planning (viz., planning manpower, cash flows, profits/surpluses/deficits, etc.)
 - 6.2. Managing change within an ongoing project (changing circumstances, resources, financing, etc.)
 - 6.3. The use of project management in making leadership/management decisions
 - 6.4. Legal issues of project management: scope of work, deliverables, claims
7. Case studies to examine best practices and common project management pitfalls.

Laboratory session: 15 hours of interactive session

Textbook: Lecture notes and selected papers

Reference books:

1. *Guide to Project Management: Getting it right and achieving lasting benefit*, by Paul Roberts, Publisher Wiley; 2 edition (February 4, 2013)
2. *Making Things Happen: Mastering Project Management (Theory In Practice) Revised Edition*, by Scott Berkun, Publisher O'Reilly Media; Revised edition (April 4, 2008).
3. *A Guide to the Project Management Body of Knowledge: PMBOK(R) Guide 5th Edition*, by Project Management Institute, Publisher Project Management Institute; 5 edition (January 1, 2013).
4. *Project Management: A Systems Approach to Planning, Scheduling and Controlling* by Harold R. Kerzner, Publisher: Wiley; 11 edition (February 18, 2013)

5. *Project Management: A Managerial Approach 7th edition.*, by Meredith, R. Jack and Mantel, Jr., Samuel J., *Publisher: Wiley, 2008, ISBN 0-470-22621-8*

Journals and Magazines:

1. Project Management Journal
2. International Journal of Project Management
3. Leadership, <http://lea.sagepub.com/>
4. <http://www.projecttimes.com/>
5. <http://tunnellingjournal.com/>

Grading system:

1. Mid-sem exam (25%)
2. Final exam (25%),
3. Assignments/projects (30%).
4. Laboratory Sessions (20%).

Instructors:

Expected outcomes: Students, at the completion of this course, are expected to:

1. Understand the theory of project management
2. How to effectively use project management in leading/managing projects, departments or organizations.
3. Have knowledge on identifying the different stages involved in project planning
4. Have the idea of using the project scheduling and evaluation charts
5. Demonstrate how to measure project progress.
6. Demonstrate how to make the time, cost and scope adjustment.
7. Understand the relevance of milestones in monitoring and measuring progress taking account of budget, expenditure and risk management
8. Have the knowledge of the project management process, like the project definition, identification of project scope, project life cycle, and project planning. Uses case studies to examine best practices and common project management pitfalls.
9. Understand the planning of the project activities and sequence, subjected to the constraints of the location, site condition and area of assembly site, the availability of construction equipments and tools, the operate-ability of load-out points, the effect of weather, the availability of transportation barge, the capacity and height crane of derrick barge, which is expressed in planning and scheduling and procurement schedule.
10. Understand the general incorporation and tax status (including tax-exempt status) of projects, general liability, regulatory compliance/reporting, and contracts. Emphasis is on the roles, responsibilities, processes, and powers of each level of engineers.
11. Professional responsibility as regards legal requirements, liability issues, and ethics in managing projects.