

BS0821 – PROJECT MANAGEMENT

COURSE TUTOR

Name: Dr Eleni Hadjiconstantinou
Room: 807 (Level 8 Mech Eng)
Extension: 49163
E-mail: e.hconstantinou@imperial.ac.uk

COURSE AIMS

Today's competitive business environment is pushing companies towards a greater emphasis on innovation of product and processes. Project management offers a highly structured approach to effectively manage change and is capable of being adapted to fit a diverse range of applications. Managing projects is a highly complex job. If today's project leaders are to cope with complex projects, they need to think of themselves as change agents – aspiring individuals who implement change by gaining the commitment and action of key people both inside and outside their organisation.

Through the acquisition of a range of “soft” and “hard” tools and techniques, and linking theory to live projects, this course aims to provide students with a sound understanding and knowledge of the basic concepts and analytical skills underpinning effective project management in any industry sector.

COURSE OBJECTIVES

1. Knowledge

Students will learn the responsibilities and essential tools and techniques required to successfully plan, manage, control and evaluate a project in a complex environment. Using practical examples, the course will demonstrate how these approaches can be successfully applied in the development and management of any major project.

2. Skill

Students should develop the fundamental skills required of all project managers:

- critical reasoning skills,
- quantitative analytical skills,
- integrative skills,

from both a theoretical and practical viewpoint.

LEARNING OUTCOMES

Upon completion of this course, students will be able to apply the basic tools and techniques of project management in practice:

- Write a sponsor and project requirements definition.
- Construct a comprehensive project schedule
- Evaluate a project plan subject to time, cost and resource constraints.

COURSE STRUCTURE (20 hours)

The course consists of ten 2-hour sessions and runs in the Spring Term:

- **Week 1: Projects and project management in context.**
Introduction, meaning and scope of projects; project types; project life cycle; project characteristics; identification and management of stakeholders.
- **Week 2: Key roles and responsibilities. Project contract strategy.**
The roles of the project manager, the sponsor and the user.
Forms of contracts and project structure.
Private Finance Initiative (PFI)/ Public Private Partnership (PPP).
- **Week 3: Project organisational forms. Case-study.**
Alternative project organizations.
The Nimrod project: lessons to be learned
- **Week 4: Introduction to Programme Management. Case-study.**
Projects in the context of programmes.
The Docklands Light Railway (DLR): lessons to be learned
- **Week 5. Introduction to project planning.**
Early project definition: Sponsor's and Project Requirements Definition (SRD, PRD).
Work Breakdown Structures (WBS). Activity identification, bar charts, project network logic diagrams. Examples.
- **Week 6. Time-scale planning.**
The Critical Path Method (CPM), computation of floats. Examples.
- **Week 7. Reducing project time.**
Multiple dependency networks. Time-cost trade-offs. Examples.
- **Week 8. Planning under uncertainty.**
Programme Evaluation Review Technique (PERT). Examples.
- **Week 9. Resource planning and scheduling.**
Resource allocation procedures; time- and resource-loaded schedules.
Examples.
- **Week 10. Cost estimation and risk analysis.**
Cost estimation; risk analysis: cost and schedule.
Practical considerations: why schedules are so difficult to beat?

TEACHING METHODS

The use of case-studies and real-life examples will illustrate the practical aspects of the course and tutorial questions will be handed out, where appropriate, to consolidate knowledge in the analytic skills developed.

COURSE GRADE

- A closed-book final examination (70%)
- Group Assignment (30%)

SOURCES OF INFORMATION ON PROJECT MANAGEMENT

Recommended Textbooks

1. Lockyer K. and Gordon J., *Project management and project network techniques*, Financial Times Prentice Hall, 7th edition, 2005, ISBN 0-273-69378-6. **Cat. B**
2. Burke R., *Project management: planning and control techniques*, John Wiley & Sons, 4th edition, 2003, ISBN 0470851244. **Cat. B**
3. Kerzner H., *Project management: A systems approach to planning, scheduling and controlling*, John Wiley & Sons, 8th edition, 2003, ISBN 0-471-22577-0. **Cat. B**
4. Gray C.E. and Larson E.W., *Project management: the managerial process*, McGraw- Hill, 3rd edition, 2006, ISBN 007-124446-8. **Cat. B**
5. Meredith J.R. and Jr. Mantel S.J., *Project management: a managerial approach*, John Wiley & Sons, 5th edition, 2003, ISBN 0-471-07323-7. **Cat. B**

Professional Bodies

- A Guide to the Project Management Body of Knowledge, Project Management Institute (PMI), USA.
- The Association of Project Managers Body of Knowledge, APM, UK.
- The Association of Project Managers Code of Conduct, APM, UK,
- Guide to Project Management, British Standard (BS).

Useful Websites

- www.pmi.org
- www.apmggroup.co.uk