Module Leader
Dr N Oraiopoulos

Lecturer
Dr N Oraiopoulos

Timing and Structure
Lent term. Eight 2-hour sessions + coursework. Assessment: 100% coursework (please see details below)

Aims
The aims of the course are to:

- introduce the principal elements of project management; equipping students with the basic skills to enable
  them to manage a project and to operate effectively as part of a project team.

Objectives
As specific objectives, by the end of the course students should be able to:

- use a set of tools and frameworks that enable effective project planning and execution.
- understand the need for appropriate governance structures and control systems in the delivery of project
  objectives.
- run a small scale project and to be an effective member of any project team.

Content

Session 1: Introduction to Project Management
- Wide applicability of Project Management (PM)
- Reasons why project fail
- History of PM: Roots of change
- Critical Path Method (CPM): Dragonfly Case - part 1

Session 2: Project Planning and Control
- Beyond the CPM; the PERT method
- EVA/ABC
- Design Structure Matrix
- Monte Carlo Simulation and Limitations
- Dragonfly Case - part II

Session 3: Ambiguity in Large Innovative Projects
Coursework

In-class individual case discussion contributions (20%), Group case write-up (30%), Coursework work individual (50%).

<table>
<thead>
<tr>
<th>Coursework activity #1: Project Management Case Study</th>
<th>Format</th>
<th>Due date &amp; marks</th>
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<tbody>
<tr>
<td>Coursework 1 brief description</td>
<td>Group Report</td>
<td>Beginning of [18/60]</td>
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<tr>
<td>You will be given a case and asked to analyse the risk management framework that the managers use to ensure a smooth transition of the IT operations.</td>
<td>anonymously marked</td>
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<tr>
<td>Learning objective:</td>
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<tr>
<td>• Assess the Risk Management Framework and implementation in a large scale IT project</td>
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<td>• Develop contingency plans and mitigation techniques</td>
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<td>• Develop recommendations to extend the existing framework</td>
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## Coursework

<table>
<thead>
<tr>
<th>Coursework activity #2 Project Prioritization and Analysis / Final</th>
<th>Format</th>
<th>Due date &amp; marks</th>
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<td>Coursework 2 brief description</td>
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You will be given a case study and asked to analyse the risk profiles of different projects portfolios. You will have to make a recommendation regarding what projects should the company select and defend your recommendation with both quantitative and qualitative arguments.

**Learning objective:**

- Understand the complexity of project portfolio selection processes
- Analyze the organizational dynamics that affect project execution in project teams
- Analyze how collaborative agreements and contracts can affect project performance

**Booklists**


**Examination Guidelines**

Please refer to [Form & conduct of the examinations](http://teaching.eng.cam.ac.uk/content/form-conduct-examinations) [3].

**UK-SPEC**

The [UK Standard for Professional Engineering Competence (UK-SPEC)](http://teaching.eng.cam.ac.uk/content/form-conduct-examinations) [4] describes the requirements that have to be met in order to become a Chartered Engineer, and gives examples of ways of doing this.

UK-SPEC is published by the Engineering Council on behalf of the UK engineering profession. The standard has been developed, and is regularly updated, by panels representing professional engineering institutions, employers and engineering educators. Of particular relevance here is the [‘Accreditation of Higher Education Programmes’ (AHEP) document](http://teaching.eng.cam.ac.uk/content/form-conduct-examinations) [5] which sets out the standard for degree accreditation.

The [Output Standards Matrices](http://teaching.eng.cam.ac.uk/content/form-conduct-examinations) [6] indicate where each of the Output Criteria as specified in the AHEP 3rd edition document is addressed within the Engineering and Manufacturing Engineering Triposes.

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**Source URL (modified on 19-01-18):** http://teaching.eng.cam.ac.uk/content/engineering-tripos-part-iib-4e12-project-management-2017-18

**Links**

[1] mailto:no245@cam.ac.uk