

## CE412 Management

**Co-ordinator:** Ms. A.L. Ahearn, Room 321, [a.hearn@ic.ac.uk](mailto:a.hearn@ic.ac.uk)

**Status:** Elective

**Lecturers:** Ms A Ahearn (ALA)  
Prof Anthony Lavers and other guest lecturers

**Structure:** 56 contact hours, including lectures, tutorials and case studies.

**Links:** see below

### Introduction

Britain is generally viewed to be strong in civil engineering but weak in efficient engineering management. One of the reasons for this is the high profile of law in construction management. Recent law reforms have sought to push the construction industry towards less adversarial modes of management. The function of construction law and its relationship to project management (and the reasons for finding better approaches) are explored in this module. It should be noted that this module is directed at construction project management rather than infrastructure project management.

### Aims

This course is designed to develop students' understanding of concepts and strategies involved in managing people and construction projects.

### Links with other course modules

The Management module follows on from CE305 Engineering Economics and Management, the 3<sup>rd</sup> Year Group Design Projects (especially the Constructionarium), and also relates to Engineering in Context 1 and Engineering in Context 2.

### SYLLABUS

(i) *Construction Law with Professor Anthony Lavers:* This module provides an in-depth introduction to key construction law concepts and applications, concentrating on contract, tort, statutes and dispute resolution. The lectures will be provided by Professor Anthony Lavers as visiting lecturer. The tutorials will be provided by Ms Ahearn.

*Project Management (Ms A. Ahearn):* This second term module will be presented through guest lectures from members of industry or experienced practitioners. They are intended to provide a case-study approach to project management. Attention will be paid to students' experience on the 3<sup>rd</sup> year Constructionarium and making sense of the management problems and strategies that were used there.

- (ii) **Skills.** The course will help develop the following skills:
- ❑ Communication and presentation skills, both oral and written. Oral skills will be developed in class discussions and group presentations. Written skills through the assessment.
  - ❑ Team working skills through the group exercises.
  - ❑ Research skills through the use of the library and other facilities when doing the course assignments.
  - ❑ Reflective learning skills through the second term coursework.

### **Learning Outcomes:**

At the end of the course, students should be able to:

1. Outline the key concepts underpinning contracts, torts and construction dispute resolution;
2. Give opinions as to how the engineering industry, particularly construction, could reduce disputes in construction;
3. Describe the complexities of construction projects and list some of the strategies that may be applied in coping with these complexities;
4. Give reasoned opinions about how construction project management could be improved generally and in given cases.
5. Explain the significance of Health and Safety to engineers.
6. Demonstrate reflective learning practices to begin relating management learning to technical sub-disciplines of civil and/or environmental engineering.

### **Coursework and Submission Dates**

First term: short essay on law and small group presentation in tutorial.

#### Second Term:

A piece of reflective commentary on either (a) legal risks of the Constructionarium; or (b) project management issues arising from the Constructionarium. For students entering final year on exchange from sister institutions, the coursework will involve a reflective commentary on comparative law or comparative management issues affecting construction and/or engineering projects between UK and the student's home country.

### **Assessment**

#### First term:

Essay 15%, Group presentation 5%

#### Second term

Reflective commentary 20%

Examination 3 hours 60%

The examination involves essay style questions and problem scenario questions. As no similar prior examination paper exists, a tutorial on how to approach the examination will be given by Ms Ahearn in second term.

### **Recommended Reading**

FREEMAN-BELL G. & BALKWILL J., *Management in Engineering*, Prentice Hall, 1993.

LANIGAN M., *Engineers in Business*, Addison-Wesley, 1992.

PAYNE AC, CHELSOM JV & REAVILL RP, *Management for engineers* John Wiley and Sons, 1996. (Note that this text may have been used in module CE305).

UFF, J *Construction Law*, Sweet and Maxwell, London (any 1990s edition will be of use)

Other reading will be mentioned in class and handouts will be provided.