**CO2012 Software Project Management and Professionalism**

**Credits:** 10  
**Convenor:** Dr T. Ridge  
**Semester:** 1st

**Prerequisites:**  
*Essential:* CO1003, CO1005, CO1007, CO1019  
*Desirable:* CO1001, CO1012

**Assessment:**  
Coursework: 100%

<table>
<thead>
<tr>
<th>Lectures:</th>
<th>10 hours</th>
<th>Problem Classes:</th>
<th>0 hours</th>
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<tbody>
<tr>
<td>Surgeries:</td>
<td>10 hours</td>
<td>Class Tests:</td>
<td>1 hours</td>
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<tr>
<td>Laboratories:</td>
<td>10 hours</td>
<td>Private Study:</td>
<td>44 hours</td>
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**Subject Knowledge**

**Aims**  
According to a report of British Computer Society, only about 16% of IT projects can be considered truly successful and over 60% experience severe problems. The purpose of this module is to gain a practical understanding of the software development process, to discuss the management, professional and ethical issues of software development, and get acquainted with industrial best practices in preparation for the software engineering group project.

**Learning Outcomes**  
At the end of the module a student should:

- be able to demonstrate a broad understanding of the development processes involved in producing a large software system;
- be able to apply the techniques acquired in the companion module CO2006 in a small team in the course of a web engineering mini project;
- be able to demonstrate the need for quality assurance, project and risk management techniques, and be able to apply suitable strategies in simple cases;
- be able to demonstrate what “professionalism” means in the context of the software industry, and be aware of ethical and legal issues, like the Data Protection Act, likely to affect every professional in the software industry.

**Methods**  
Class sessions together with course notes, recommended textbooks, worksheets, mini project.

**Assessment**  
Marked coursework, including written essays, mini-projects, lab tests and class tests.

**Skills**

**Aims**  
To develop analytical and problem solving skills, including the ability to make appropriate abstractions. To make reasoned judgements based on quantitative data. To learn skills in research and presenting ideas in a written form.

**Learning Outcomes**  
Students will be able to: formulate technical problems and their solution in a methodical way; justify solutions; research an issue and present their findings in writing in a balanced manner.

**Methods**  
Class sessions together with worksheets.

**Assessment**  
Marked coursework, including a written essay, a mini-project and a class test.

**Explanation of Prerequisites**  
A sound knowledge of basic algorithms, data structures and programming is required. An understanding of logic and discrete structures is important for rigorous specification of software systems. Some knowledge of database systems is desirable. The audience for this module will be a subset of that of CO2006, and the syllabi will be coordinated to use some of the conceptual and linguistic background provided by CO2006.
Course Description This module teaches software engineering management principles and methods needed to specify, design and implement a large system using object oriented techniques, and gives them practice in developing such systems.

Detailed Syllabus
Professional and legal issues: professional liability and its limits; data protection and freedom of information; intellectual property.
Software project management: software process models; risk assessment; project planning and execution.
Languages, methods, and tools for Web Engineering.

Reading List


Resources Course notes, web pages, study guide, worksheets, handouts, lecture rooms with OHP and data-projector.

Module Evaluation Course questionnaires, course review.