**Software Design and Implementation**

**Overview**

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| Level | 3 (Semester 6) |
| Duration | **6** Weeks |
| Lectures | 1 weekly 2-hour seminar on professional topics for 6 weeks. |
| Practicals/tutorials | On 1-hour per week meeting with team guide. |

**Learning Outcomes**

1. In-depth, applied operative knowledge of all aspects of the team-based software development process for a medium-sized software-centric system.
2. Operative knowledge of legal, social, ethical and professional issues in the international and UK IT sectors.
3. Written and verbal communication skills.
4. Applied project management and teamwork skills.

**Syllabus**

This course consists of a group software project and some supporting lectures/seminars on professional topics. Group projects are supervised by an academic staff member.

* Team-based software development: proof-of-concept-based requirements analysis review, modular software design, quality-based software coding, testing and deployment.
* International and UK-specific professional Issues: Legal, social, ethical and professional issues in IT: ethics; safety; privacy and data protection; organisations and their structure; finance and management accounting; human resources management; risk management; legal obligations; intellectual property; professional institutions and codes of conduct.
* Communication skills: Effective written and verbal presentation; public engagement.
* Applied project management and teamwork skills: managing teams and the development process; technical and personal self-management as a team member in the workplace.