

## MODULE DESCRIPTOR

<b>MODULE TITLE</b>	THE AGILE PROFESSIONAL		
<b>MODULE CODE</b>	CO2410 (L5)	<b>CREDIT VALUE</b>	20 UK CREDITS / <u>10 ECTS</u>
<b>SCHOOL</b>	SCHOOL OF SCIENCES		

### MODULE AIMS

This module uses a people-centric approach to develop the project leadership skills required by computer practitioners and explores working in an Agile way on a course-specific group project. It reinforces the students' understanding of social, professional, ethical and legal aspects of Computing and prepares the students for their final year project by introducing the necessary teamwork, project planning and investigation skills. It provides further opportunity for reflection, developing personal and communication skills, relevant for teamwork and for employability.

1. To develop project skills by applying Agile approaches to deliver a team project relevant to the student's course
2. To deepen the ability to critically analyse approaches to project management and professional, legal and ethical issues in computing
3. To develop skills in finding and using relevant literature
4. To enhance students' employability skills

### MODULE CONTENT

**Indicative syllabus content:**

#### **Project Management Techniques**

Overview of traditional project management: Up-front specification, design, planning and scheduling. Project management triangle: cost, scope, time (and quality). Project objectives and value metrics  
Agile project management goals: delivering business value within resources, stakeholder involvement and appropriate quality.

Agile techniques: timeboxing, sprint (timebox) planning (client estimating value, developers estimating effort), facilitative leadership (e.g. scrum master) MoSCoW priorities, user stories, effective meetings, visible status (e.g. Kanban), continuous process improvement through retrospectives and feedback

Use of appropriate tools and methods for performance and delivering value (e.g. development or investigation) and administration (e.g. change control and configuration management, record-keeping)  
Teamworking and group dynamics, communication and collaboration. Leadership, people, roles and interactions with the business

#### **Professional Issues and Employability**

Ethical issues related to the IT profession: codes of conduct, standards, quality, legal issues.  
employability issues: investigating and applying for jobs, applicant selection processes, including interviewing

#### **Critical Analysis**

Finding and evaluating information, structuring, creating and presenting a coherent discourse in an appropriate format

### INTENDED LEARNING OUTCOMES

**On successful completion of this module a student will be able to:**

1. Evaluate and apply appropriate Agile techniques to deliver a team project successfully.
2. Communicate effectively in a variety of situations e.g. team meeting, job application.
3. Discuss the professional and ethical issues relevant to a computing practitioner.
4. Find, evaluate and apply relevant literature to a given problem.
5. Critically review the processes, product and value delivered in a team-based Agile project

## TEACHING METHODS

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Although traditional approaches will be outlined to illustrate differences with the Agile approach, the emphasis will be on Agile approaches that use empowered teams and extensive user involvement to deliver business value in an iterative and incremental lifecycle.

The first part of the module develops skills and attitudes generally required by computing professionals. The students have two options to develop above-mentioned skills and attitudes: in class including Mock interview and other simulated work environment scenarios or an industrial internship for at least 6 weeks where they will practice the same skills in a real working environment.

Lectures introduce concepts of: project management: team organisation, choice of lifecycle, estimation, scheduling, planning, and monitoring of progress, approaches to establishing value, ensuring quality and relevant legal issues.

Workshops illustrate the concepts and apply relevant techniques to small problems, with the aim of encouraging discussion and focussing on the people and project leadership, not the technical product.

Students will engage in directed activities to search for and apply relevant published literature to supplement the discussion in class.

Staff aim to apply the principles of Agile development to the learning environment, by trying things out, giving and receiving feedback, then trying again.

In the second part of the module, students undertake a group-based case study using appropriate project management tools and techniques to plan and perform a small team project applying Agile methods. Each course team develops these course-specific case studies. This allows students to apply the project management principles to tackle a problem closely related to their course aims. This also prepares students for their final year project.

A significant part of the learning is experiential and arises from the carefully chosen and monitored group project. Students will apply techniques and skills appropriate for their course in a realistic context, learning how to select and apply them in a practical situation. It is vital to the development of the students' understanding of Agile project management that they are encouraged and facilitated to apply agile techniques in this team project. Reflection and the giving and receiving of feedback are key elements in this learning process.

The module team aim to simulate realistic situations. The first assignment could be based around an application for an appropriate job, including an interview and performance of a selection activity. The second assignment will be based around the performance and evaluation of a team project.

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## ASSESSMENT METHODS

This module is assessed through a coursework and a group project.