Institute of Coding Skills Bootcamp

Software Engineering Project Management

Location: Hybrid - Swansea University and online | **Professional Learner Credits:** 10 | **Cost:** Free
Contact Hours: 2 hours of tutorials per week, 10 weeks

Synopsis:

Software projects have long had a reputation for cost and time overruns - but they need not! There are well-established, and emerging, techniques and processes to manage them well and effectively. This module develops the fundamental skills of successfully planning and managing complex software systems, whilst also obtaining an understanding of the implications/issues such projects may encounter. Learners will develop an understanding of typical project management techniques and methods as well as those more software-focused. Agile methodologies like Scrum, which are becoming a de-facto standard in the industry will be covered, as well as more traditional methodologies that are still widely used. Furthermore, many projects have significant legal, social, ethical and professional consequences that a practitioner needs to be aware of and sensitive to.

Notes:

This module is aimed at professional learners who are looking to develop their project management skills, particularly in the area of software engineering.

Assessment:

Quizzes, assignments, and a 2-hour exam at the end of the 10 weeks.

Aim:

This module aims to introduce learners to the process of planning and managing the development of software using project management techniques and modern life-cycle methodologies, whilst understanding the legal, social, professional, and ethical ramifications of software.

Learning Outcomes:

Learners will be able to plan and manage basic projects, including risk analysis and controls, time scale and resource planning, exception and progress monitoring, and control; evaluate and make choices between a range of software development models, including agile as well as traditional, based on an understanding of their specific properties, advantages, and disadvantages; apply a range of software development models; explain the legal, social, ethical and professional framework, particularly with reference to software engineering; work in teams on software projects; and create and develop a software project plan.

Syllabus:

Project Planning and Management Techniques: Team Management; Organisational Structures; Requirements Specification; Timescales and Dependencies; Scoping and Resource allocation; Risks: Identifying, quantifying, managing, monitoring and mitigating

Methodologies for developing software: Heavyweight and lightweight models; Traditional: waterfall, prototyping, spiral; RAD: Rapid Application Development; Iterative and Incremental; Agile Development; Hybrid Models: Scrum;

Legal, Social, Ethical and Professional Issues: Understanding, Consequences