1. Pre-requisites
F29SO – Software Engineering & F29PD – Professional Development or equivalent

2. Linked Modules
(specify if synoptic)
None

3. Excluded Modules
None

4. Replacement Module
Code: None
Date Of Replacement: None

5. Availability as an Elective
Yes ☐ No ☑

6. Degrees for which this is a core module
Mandatory module for MSc Software Engineering
Optional module for BSc Computer Science & BSc Information Systems, MEng Software Engineering, MSc IT (software systems), MSc IT (Business),

7. Aims
This module explores a range of issues concerning advanced contemporary methodological approaches to information systems development. The aim is to enable students to develop critical faculties and techniques in relation to the selection and application of these methodological approaches.

8. Syllabus
There is a growing requirement in industry for engineers and scientists with good and appropriate analytical skills when considering the development and evolution of systems, in particular information systems. This module develops further the knowledge and skills students should have already gained in the Information Systems and Software Engineering modules in topics such as:

- General Systems Principles;
- Systems Classification and Taxonomy Models;
- Information Systems Life Cycle and Functions;
- Paradigmatic Approach to Methodology Classification;
- Framework for Analysis and Comparison of Methodologies (NIMSAD & Fitzgerald’s);
- Process Improvement Models;
9. Learning Outcomes (HWU Core Skills: Employability and Professional Career Readiness)

**Subject Mastery**

*Understanding, Knowledge and Cognitive Skills*  
Scholarship, Enquiry and Research (Research-Informed Learning)

This module develops further the knowledge and skills students should have already gained in the Information Systems and Software Engineering modules. It will enable students to:

- Determine alternative approaches to gathering requirements and systems development
- Compare methodologies for use in organisations using a standardised Framework
- Rationalise systems development to prepare a more relevant system

**Personal Abilities**

*Industrial, Commercial & Professional Practice*  
Autonomy, Accountability & Working with Others  
Communication, Numeracy & ICT

- Critical reading and reviewing works in the field
- Evaluating Methods under an agreed Framework
- Structuring an argument (PDP)
- Presentations of mini lectures to show understanding of the topic area (PDP)
- Use of VLE as a means of learning, contributing and discussing

10. Assessment Methods

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11. Re-assessment Methods

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12. Date and Version

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