F28SX Software Design

**COURSE DETAILS**

**Course Code:** F28SX  
**Full Course Title:** Software Design  
**SCQF Level:** 8  
**SCAF Credits:** 15  
**Available as Elective:** No

**DELIVERY LEVEL**

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<th>Undergraduate:</th>
<th>Yes</th>
<th>Postgraduate Taught:</th>
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<th>Postgraduate Research:</th>
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Additional Information:

**COURSE AIMS**

- An introduction to a range of processes and methods that promote the design of high quality software systems.  
- A perspective of where design sits within the development life-cycle.

**LEARNING OUTCOMES – SUBJECT MASTERY**

- To demonstrate a critical understanding of software process models and design methods.  
- To be able to develop design solutions using a range of structured notations.  
- To demonstrate a critical understanding of the context in which software design takes place, in particular requirements engineering and the activities of validation and verification (testing).

**LEARNING OUTCOMES – PERSONAL ABILITIES**

- To be able to use appropriate methods and standards for practice and documentation in software engineering and information systems.  
- Demonstrate evidence based approaches to problem solving.  
- Use a range of numerical and graphical skills in evaluating and communicating ideas, as well as measuring progress toward achieving goals.  
- To be aware of distinctive features of industrial practice  
- To be able to identify, define, and analyse alternative project scenarios  
- Take moderate responsibility for their work and exhibit critical reflection on development process  
- To be able to relate learned knowledge to a work-based environment

**SYLLABUS**

- Software process models;  
- Architectural styles;  
- Design methods and associated notations – including function-oriented, object-oriented and component-based design; design patterns;  
- Software development life-cycle issues, with particular focus on requirements engineering, validation and verification (testing).

**COURSE RELATIONSHIPS**

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