COURSE DETAILS

Course Code: F29SY
Full Course Title: Software Engineering
SCQF Level: 9
SCAF Credits: 15
Available as Elective: No

DELIVERY LEVEL

Undergraduate: Yes  Postgraduate Taught: No  Postgraduate Research: No

Additional Information:

COURSE AIMS

- To equip students with skills for the effective management of a work-based project, encompassing the software development life-cycle.

- To enable students to reinforce their knowledge gained in software processes, internet technology, database management, and interaction design.

- To acquire knowledge in systems analysis, requirements capture, system specification and, planning, execution, management and evaluation of software projects.

- To build teamwork, time management and efficient communication skills as well as capability in the understanding and critical analysis of work-based software development projects.

- To enable students to develop a broader comprehension of the interrelationship between work-based software development projects and software engineering theory, methodologies, tools and methods.

- To give students the opportunity to work on projects that contribute and matter to their employment.

- To enable students to apply what they've learned in their academic courses to real-world software projects as full-time employees do.

LEARNING OUTCOMES – SUBJECT MASTERY

- A broad and theoretical knowledge and understanding of the various development and programming paradigms, software development life cycle, and software development methodologies
- Detailed and practical knowledge of the use of methodologies for the design, development, deployment and evaluation of systems integrated within their work places.
- Practice in the application of software design, software development, databases or, web development theory to a real-world project
- Demonstrate comprehensive knowledge and critical understanding of project planning, risk assessment and management.
LEARNING OUTCOMES – PERSONAL ABILITIES

- Identification, critical analysis and evaluation of the development of a software system (PDP)
- Ability to work as part of a team to plan, execute and evaluate software projects
- Practice in taking responsibility for own work, reaching a consensus, effective communication, and working with others to a deadline (PDP)
- Relate and integrate their work-based experience with the knowledge and skills acquired in their academic courses.

SYLLABUS

- Review and extension of the components studied in earlier years which contribute to software projects.
- Software project management including team work, project planning and costing, management and, risk assessment.
- Use of Industry-level Standards for software development and documentation, covering aspects such as change control and requirements traceability.
- Further study of software development tools and methodologies.

COURSE RELATIONSHIPS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Level</th>
<th>Title</th>
<th>School</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>F28SX</td>
<td>8</td>
<td>Software Design</td>
<td>School of Math and Comp Sci.</td>
<td>Pre-Requisite</td>
</tr>
<tr>
<td>F28DD</td>
<td>8</td>
<td>Database Management Systems</td>
<td>School of Math and Comp Sci.</td>
<td>Pre-Requisite</td>
</tr>
<tr>
<td>F29RD</td>
<td>9</td>
<td>Professional Development</td>
<td>School of Math and Comp Sci.</td>
<td>Taught Synoptic</td>
</tr>
<tr>
<td>F28ED</td>
<td>8</td>
<td>User-Centred Experimental Design</td>
<td>School of Math and Comp Sci.</td>
<td>Pre-Requisite</td>
</tr>
</tbody>
</table>

LOCATION AND ASSESSMENT METHODS

<table>
<thead>
<tr>
<th>Type</th>
<th>Coursework 100</th>
<th>Assessment</th>
<th>All Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synoptic Course</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>