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| **UNIT TITLE: Process Analysis and Requirements Engineering** | |
| **CREDIT POINTS: 20** | **UNIT CODE: CDA603** |
| **FHEQ LEVEL: 6** | **SCHOOL: Media Arts and Technology** |
| **UNIT DESIGNATION: Traditional** | **Programme group: Computing** |
| **Unit delivery model: CD** | **Max & Min Student No: N/A** |

**TOTAL STUDENT WORKLOAD**

Students are required to attend and participate in all the formal scheduled sessions for the unit. Students are also expected to manage their directed learning and independent study in support of the unit.

**PRE-REQUISITES AND CO-REQUISITES:** None

**UNIT DESCRIPTION**

The existence of a correct, complete and unambiguous requirement specification is key to the success of a software project. A requirement specification acts as a target for validation activities, a framework for project estimation, planning, monitoring and control and through traceability is an aid to maintenance. However, it is only of value if it meets the goals of an organisation and it is perfectly possible to devise a requirements specification that captures the functional requirements of users but fails to address the wider context of organisational objectives. It is therefore necessary to be able to analyse a wide range of organisational factors, including human systems, a high-level activity that relies on a high level of professionalism and strong interpersonal skills.

The aim of this unit is to examine the role of requirements elicitation and expression techniques, informal, semi-formal and formal, and to assess the applicability of particular requirements engineering tools and techniques to different circumstances. Further, the unit seeks toexamine the subtle and complex blend of organisational factors that drive a computer-based project.

The unit will offer students the opportunity to participate in a team-based, real-life requirements engineering project, usually but not invariably within the University.

**LEARNING OUTCOMES**

On successful completion of the unit, students should be able to:

**Knowledge and Understanding**

**K1** Evaluate requirements engineering techniques in a project context.

**Cognitive Skills**

**C1** Evaluate the suitability of software solutions in an organisational context.

**Practical and Professional Skills**

**P1** Apply requirements engineering techniques in a professional manner.

**Transferable and Key Skills**

**T1** Monitor and assess personal contribution to a self-managed team project.

**AREAS OF STUDY**

**Project Management**

Project monitoring and control, risk and cost as drivers for project management.

**Requirements Engineering**

Techniques and tools for the elicitation, analysis, expression and management of software requirements. Requirements validation.

Documentation standards, including IEE830.

Ethical considerations in requirement engineering, including codes of practice and managing stakeholder expectations

**People and Organisations**

Teams and team members, computing systems in an organisational context, understanding business processes.

Ethical considerations of requirements engineering including confidentiality and managing stakeholder expectations.

**LEARNING AND TEACHING STRATEGY**

The learning approach is based on a series of small-group activities used to explore the key concepts associated with the unit content and place these in the context of a team-based project. Presentation of core theoretical concepts will take place in the early stages of the delivery, with later stages focused more on development of the skills required to undertake the project work. This will include learners being engaged in role-plays to simulate client-facing situations and to develop the soft skills associated with working with stakeholders in the requirements engineering process. A ‘live brief’ involving external stakeholders is used to inform the assessment for the unit. Students use the skills developed earlier in the unit to meet the requirements of the brief.

**ASSESSMENT STRATEGY**

Both the in-course assessments for this unit are based on a self-managed team requirements engineering project. The project will be based on a real-world system and will involve a number of key stakeholders. The main focus of the project as a whole is the elicitation, analysis, specification and validation of the requirements for the project. It is expected that this will involve the development of a verified and validated prototype or model of a software system. Each team will be required to maintain a library of project documentation. Periodic audits of the project library will be used to provide appropriate and timely formative feedback on progress.

The first assessment will focus on evaluation of the process adopted by the team in relation to the relevant theory and standards, professional codes of practice, and the organisational context. This assessment will take the form of an individual written report.

The second assessment will focus on assessing the outcomes of the team project work in an organisational context. Assessment will be based on a team presentation of the project documentation and a validated prototype or model of the target software system. A team grade will be awarded by the tutor and a formal peer and self-assessment process will be used to determine the differentiation of grades between students of up to a maximum of 50% of the mark corresponding to the team grade awarded, subject to an appropriate contribution to the team project being made by each team member. The individual grades based on peer and self-assessments will be subject to moderation by the tutor to ensure compliance with University assessment policies and procedures.

**ASSESSMENT**

AE1 weighting: 50%

assessment type: Written report

length/duration: 1500 words

online submission: Yes

grade marking: Yes

anonymous marking: Yes

AE2 weighting: 50%

assessment type: Presentation

length/duration: 45 minutes per team

online submission: No

grade marking: Yes

anonymous marking: No

**Aggregation of marks**

The marks for each element of assessment will be aggregated to give an overall mark for the unit.

**Re-assessment Arrangements**

Students referred in AE1 will be required to resubmit a written report based on the project documentation created by their team during the year.

Students referred in AE2 will be expected to submit a written assignment based on a new case study.  In doing so, the student will be required to address how they would contribute to planning and design as part of a team, drawing on theoretical models and relevant examples of team-working undertaken though the year and to create selected artefacts for the project (e.g. design a survey or describe an appropriate requirements engineering approach).

Unit Author: Sheila Baron

**Unit history:**

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| Unit Approved/Year Implemented/Code | May 2013 | 2013/14 | SAD603 |
| Unit modified/Year Implemented/Code | Jun 2016 | 2016/17 | CDA603 |