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MODULE DESCRIPTOR

Module Title

Software Engineering and Project Management

Reference	CM3108	Version	1
Created	April 2017	SCQF Level	SCQF 9
Approved	August 2017	SCQF Points	15
Amended		ECTS Points	7.5

Aims of Module

To introduce principles and techniques involved in working as part of a team and to provide students with a knowledge of project management methodology, preparing them to critically manage and run a full software development lifecycle within a business environment.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1	Select appropriate project management techniques and methodologies for application to the management of projects.
2	Organise, prioritise and validate requirements per criteria such as feasibility, clarity, etc. in order to meet customer requirements.
3	Identify the range of software development resources required, allocate them to a project and demonstrate through involvement in a team project.
4	Produce regular informative reports and make concise, engaging and well-structured verbal and written presentations, arguments and explanations about technical problems and their solutions.
5	Work effectively as a member or lead of a small development team, understanding the principles of leadership, and adopt best practices for developing software in teams recognising challenges and approaches taken to resolve them.

Indicative Module Content

A review of different software development lifecycles, contrasting the activities performed in each phase. An introduction to tools used in software engineering (e.g. activity diagrams, use case diagrams) as well as types of project plans (e.g. Gantt charts, sprint backlogs). Project Planning. Project Management. Communication and Presentation skills. Quality assurance, ethical and legal requirements. Risk analysis. Requirements analysis. Agile development methodologies. Project Documentation: Document project progress using a RAID log to records risks, actions, issues and decisions. Standards and Best Practice Guides: Interpret and use standards in software project management, e.g. PRINCE2, ISO 10006, ISO 9001, ISO 12207.

Module Ref:	CM3108 v1

Module Delivery

Key concepts are introduced and illustrated through lectures and directed reading. The understanding of students is tested and further enhanced through interactive tutorials. In the laboratories, the student will progress through a sequence of exercises to develop sufficient knowledge and skills in software engineering and project management.

Indicative Student Workload	Full Time	Part Time
Contact Hours	36	N/A
Non-Contact Hours	114	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4, 5
Description:	A coursework assignment.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The calculation of the overall grade for this module is based on 100% weighing of C1. An overall minimum grade D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
A	The student needs to achieve an A in C1
B	The student needs to achieve a B in C1
C	The student needs to achieve a C in C1
D	The student needs to achieve a D in C1
E	The student needs to achieve an E in C1
F	The student needs to achieve an F in C1
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	CM2102 Real World Project and Professional Skills, or equivalent
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

1. SOMMERVILLE, I., 2015. Software Engineering. 10th ed. Pearson Education Ltd.
2. MANTLE, M.W. and LICHTY, R., 2012. Managing the Unmanageable: Rules, Tools, and Insights for Managing Software People and Teams. Addison-Wesley Professional.
3. NOTE, M., 2015. Project management for information professionals. Chandos Publishing.
4. MCDONALD, K.J., 2015. Beyond requirements: analysis with an agile mindset. Addison-Wesley Professional.
5. REDDY, A., 2015. The Scrumban [r]evolution: getting the most out of Agile, Scrum and lean Kanban. Addison-Wesley Professional.
6. GOODRICH, M.T. and TAMASSIA, R., 2014. Data Structures and Algorithms in Java. 6th ed. John Wiley.
7. LETHBRIDGE, T.C. and LAGANIERE, R., 2005. Object-Oriented Software Engineering: Practical Development Using UML and Java Second Edition. McGraw Hill.
8. PRESSMAN, R.S., 2014. Software Engineering: A Practitioner's Approach. 8th ed. McGraw-Hill Higher Education.