MODULE TITLE	**Group Software Engineering Project**	**CREDIT VALUE**	**15**
MODULE CODE	**ECM2434**	**MODULE CONVENER**	**Dr Matthew Collison (Coordinator)**

DURATION: TERM	**1**	**2**	**3**
DURATION: WEEKS	**0**	**11 weeks**	**0**

Number of Students Taking Module (anticipated)	**39**

DESCRIPTION - summary of the module content

This module will introduce you to those aspects of software engineering that relate to the requirements analysis and production of large systems by the application of object-orientated programming techniques to a large and complex project in a team-working environment.

The main objectives of thismodule are to introduce key aspects of software engineering to you in a practical way. Aspects of software engineerng that will be covered in this module include application of object oriented programming techniques to large-scale software system development, requirements analysis, human computer interface (HCI) design, software system design and development, software system testing and software system integration and deployment. They also include project documentation, project management and teamworking.

Prerequisite module: ECM2414 or equivalent

AIMS - intentions of the module

The aim of this module is to equip you with the necessary practical and theoretical skills to enable you to develop and implement software systems in a systematic manner. You will be introduced to the main principles underpinning software engineering through lectures and workshops. Early in the module, you will be presented with a realistic software engineering problem. Working as part of a team, you will apply the skills being presented in the course to develop and implement a software solution to the specified problem.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)

On successful completion of this module, **you should be able to**:
Module Specific Skills and Knowledge:
1 use a system design and development method that incorporates agile software engineering techniques;

2 explain the usefulness of the iterative/incremental approach to software engineering;

3 show an appreciation of styles and modalities of user interaction through designing a Graphical User Interface (GUI);

4 design and develop a system requiring data permanence, simple information processing and a GUI;

5 elicit and specify the requirements for a software system.
Discipline Specific Skills and Knowledge:
6 follow the phases of software engineering project development;

7 demonstrate a software system.
Personal and Key Transferable / Employment Skills and Knowledge:
8 work in a team;

9 contribute to the planning and management of a project;

10 maintain correct project documentation;

11 assess your achievements and those of your team;

12 complete tasks to a deadline with high quality.

SYLLABUS PLAN - summary of the structure and academic content of the module

- software process models;

- team working/roles;

- agile methods;

- requirements engineering (elicitation, analysis and specification);

- user interface design and prototyping;

- software reuse (application frameworks, product lines);

- component-based systems;

- project planning and management.

LEARNING AND TEACHING

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)

Scheduled Learning & Teaching Activities	30.00	**Guided Independent Study**	120.00	**Placement / Study Abroad**	0.00

DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS

Category	Hours of study time	Description
Scheduled learning and teaching activities	18	Lectures
Scheduled learning and teaching activities	9	Workshops

Category	Hours of study time	Description
Scheduled learning and teaching activities	3	Team project management sessions/presentations
Guided independent study	100	Coursework
Guided independent study	20	Independent study

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of Assessment (e.g. duration/length)	ILOs Assessed	Feedback Method
Not applicable			

SUMMATIVE ASSESSMENT (% of credit)

Coursework	100	Written Exams	0	Practical Exams	

DETAILS OF SUMMATIVE ASSESSMENT

Form of Assessment	% of Credit	Size of Assessment (e.g. duration/length)	ILOs Assessed	Feedback Method
Coursework 1	30	25 hours	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Written
Coursework 2	30	25 hours	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Written
Coursework 3	30	25 hours	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Written
Coursework 4	10	1 hour	11	Written

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original Form of Assessment	Form of Re-assessment	ILOs Re-assessed	Time Scale for Re-reassessment
All above	Coursework (100%)	All	Completed over the summer with a deadline in August

RE-ASSESSMENT NOTES

Since the module is normally assessed entirely by coursework, all referred/deferred assessments will be by assignment. There will be a single assignment for reassessment, designed to cover all the ILOs.

RESOURCES

INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type & level of information that you are expected to consult. Further guidance will be provided by the Module Convener

ELE: http://vle.exeter.ac.uk

Reading list for this module:

Type	Author	Title	Edition	Publisher	Year	ISBN	Search
Set	Sommerville, I.	Software Engineering	10th	Addison Wesley	2015	978978-0137053469	[Library]
Set	Hans van Vliet	Software Engineering		Wiley	2008		[Library]
Set	Pressman, R. S.	Software Engineering : a practitioner's approach	5th	McGraw-Hill	2001	000-007-365-578-3	[Library]
Set	Haase Chet and Romain Guy	Filthy rich clients: developing animated and graphical effects for Desktop Java Applications		Prentice Hall	2008	978-0132413930	[Library]
Set	Hughes Bob and Cotterell Mike	Software Project Management	5th Edition	McGraw-Hill	2009	978-0-07-712279-9	[Library]
Set	Bray, Ian	An Introduction to Requirements Engineering		Addison Wesley	2002	978-0201767926	[Library]
Set	M Cohn	Succeeding with Agile		Pearson Education	2010	978-0-321-57936-2	[Library]
Extended	Preece Jenny, Rogers Yvonne and Sharp Helen	Interaction Design: Beyond Human - Computer Interaction	3rd Edition	John Wiley and Sons	2011	978-0-470-66576-3	[Library]
Extended	Hull Elizabeth, Jackson Ken, Dick Jeremy	Requirements Engineering	3rd Edition	Springer	2011	978-1-84996-404-3	[Library]
Extended	Mason, M	Pragmatic Version Control Using Subversion	2nd	The Pragmatic Programmers	2006		[Library]
Extended	Oestereich, B.	Developing Software with UML: object-oriented analysis and design in practice		Addison Wesley	2001	000-020-175-603-X	[Library]
Extended	Stevens, P.	Using UML : software engineering with objects and components		Addison Wesley	2006	000-020-164-860-1	[Library]

CREDIT VALUE	15	ECTS VALUE	7.5
PRE-REQUISITE MODULES	ECM2414		
CO-REQUISITE MODULES			
NQF LEVEL (FHEQ)	2	AVAILABLE AS DISTANCE LEARNING	No
ORIGIN DATE	Tuesday 10 July 2018	LAST REVISION DATE	Tuesday 10 July 2018
KEY WORDS SEARCH	Object oriented programming; software system development; requirements analysis; human computer interface (HCI) design; software system design; software system testing; software system integration.		