



MODULE SPECIFICATION

Part 1: Information			
Module Title	Dissertation by Research and Development		
Module Code	UFCFUD-60-M	Level	Level 7
For implementation from	2019-20		
UWE Credit Rating	60	ECTS Credit Rating	30
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Module type:	Project		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Educational Aims: See Learning Outcomes.</p> <p>Outline Syllabus: Students are expected to carry out an in-depth survey of relevant literature to identify a focus for their study that contributes to existing research in the field. The primary research will involve the development of a software-intensive system. The written dissertation should make clear how the primary research was designed and conducted. Discussion of the outcomes of primary research should be clearly related to existing literature. The body of the dissertation should be supplemented by a critical review of key aspects of the research and development processes.</p> <p>Initially, students will be supported in their transition to researchers by a variety of means including a short series of seminars delivered by one or more experts in relevant research methods. During this period the students will develop a short presentation outlining the problem or opportunity they will be addressing, their proposed solution approach, the research methods they plan to use, and their overall plan. Then they will develop an in-depth proposal for their dissertation.</p> <p>Around this time an individual supervisor will be identified for each student. The student's individual supervisor and the research methods expert(s) will direct him/her to the extensive materials available from the UWE Research Observatory, currently (May 2012) available at</p>

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<http://ro.uwe.ac.uk/RenderPages/RenderHomePage.aspx>. It will be part of the supervisor's and research methods expert's role to help the student navigate the available material and determine which are relevant to his/her dissertation. This will be a particularly important part of the supervisory process as the research observatory materials draw upon a range of sources and have many contributors.

Following the writing of the proposal, it will be part of the supervisor's role to continue to help the student to navigate the available material and determine which are relevant to his/her dissertation. The supervisors will work with their students to confirm or modify the selected research methods, to guide them in the choice of a software development method appropriate to their work and to advise on the writing of the dissertation report.

Teaching and Learning Methods: Following the research methods phase, students will confirm a domain of interest with a supervisor. Students will then normally be expected to spend approximately 450 hours working, largely independently, on the development of their dissertation. It is expected that students will produce a software-intensive system in the course of their studies; in some instances this system might include hardware components.

Although a detailed process to follow is not prescribed, it is expected that all of the following activities will be performed:

Researching a domain of interest

Eliciting requirements

Researching related aspects

Designing, programming and testing a system to meet the stated requirements

Evaluating the utility of the software/hardware system

Further develop the implemented software/hardware system

Critically evaluating all aspects of the process

Writing up the project in a dissertation report (15,000 words)

During the first phase of the dissertation, a research methods expert will conduct a series of seminars with the students. Thirty hours of contact time will be scheduled, the equivalent of a teaching week.

In the second phase, students will be allocated a dissertation supervisor with whom they will meet to plan, discuss, and monitor the progress of their work. Meetings may take place face-to-face and/or virtually. The student and supervisor will negotiate the appropriate type and number of meetings, but there will be at least twelve hours of contact time.

Part 3: Assessment

The presentation, research proposal, dissertation report and software intensive system will be evaluated in the assessment of the student. The assessment of the report will be both in terms of its content (e.g. whether appropriate and sufficient research has been carried out, whether the design meets its requirements, and so on), and also of the expression of its content (e.g. whether it is well-structured, well written, makes appropriate use of diagrams, employs an appropriate citation system, and so on).

First Sit Components	Final Assessment	Element weighting	Description
Written Assignment - Component A		15 %	Dissertation research proposal
Report - Component A	✓	40 %	Dissertation report of approximately 10,000 - 12,000 words
Presentation - Component A		5 %	Presentation of problem/opportunity, solution approach, research methods and dissertation plan
Presentation - Component A		40 %	Viva demonstrating substantive software-intensive system

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Resit Components	Final Assessment	Element weighting	Description
Report - Component A	✓	50 %	Rework of dissertation report or software-intensive system
Presentation - Component A		50 %	Viva demonstrating substantive software-intensive system

Part 4: Teaching and Learning Methods																			
Learning Outcomes	<p>On successful completion of this module students will achieve the following learning outcomes:</p> <table border="1"> <thead> <tr> <th>Module Learning Outcomes</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>Demonstrate mastery of a complex and specialised area of knowledge and skills appropriate to the computing domain</td> <td>MO1</td> </tr> <tr> <td>Address a research problem using a solution-based approach involving a non-trivial software-intensive system</td> <td>MO2</td> </tr> <tr> <td>Demonstrate an understanding of current theoretical and methodological approaches to the development of a substantive software-intensive system</td> <td>MO3</td> </tr> <tr> <td>Conduct and write up academic research at a level appropriate to Masters credit</td> <td>MO4</td> </tr> <tr> <td>Synthesise and critically evaluate data from multiple sources</td> <td>MO5</td> </tr> <tr> <td>Evaluate the approach taken in undertaking primary and secondary research</td> <td>MO6</td> </tr> <tr> <td>Explore and understand the issues of ethics, validity, trustworthiness and reliability in research</td> <td>MO7</td> </tr> <tr> <td>Work independently to plan and manage a complex computing research project over an extended period of time, and complete it by a given deadline</td> <td>MO8</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Demonstrate mastery of a complex and specialised area of knowledge and skills appropriate to the computing domain	MO1	Address a research problem using a solution-based approach involving a non-trivial software-intensive system	MO2	Demonstrate an understanding of current theoretical and methodological approaches to the development of a substantive software-intensive system	MO3	Conduct and write up academic research at a level appropriate to Masters credit	MO4	Synthesise and critically evaluate data from multiple sources	MO5	Evaluate the approach taken in undertaking primary and secondary research	MO6	Explore and understand the issues of ethics, validity, trustworthiness and reliability in research	MO7	Work independently to plan and manage a complex computing research project over an extended period of time, and complete it by a given deadline	MO8
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Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p>https://uwe.rl.talis.com/modules/ufcfud-60-m.html</p>																		

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Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Information Technology [Sep][FT][Frenchay][1yr] MSc 2019-20

Commercial Games Development [Sep][PT][Frenchay][2yrs] MSc 2018-19

Software Engineering [Sep][PT][Frenchay][2yrs] MSc 2018-19

Information Technology [Jan][FT][Villa][1yr] MSc 2019-20

Information Technology [May][FT][Villa][1yr] MSc 2019-20

Information Technology [Sep][FT][Villa][1yr] MSc 2019-20

Information Technology [Sep][PT][Frenchay][2yrs] MSc 2018-19