STUDENT AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Information			
Module Title	Farscope First Dissertation		
Module Code	UFMFRG-80-M	Level	Level 7
For implementation from	2018-19		
UWE Credit Rating	80	ECTS Credit Rating	40
Faculty	Faculty of Environment & Technology	Field	Engineering, Design and Mathematics
Department	FET Dept of Engin Design & Mathematics		
Contributes towards	Robotics and Autonomous Systems [Sep][FT][Frenchay][1yr] PhD 2018-19		
Module type:	Project		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

Overview: Pre-requisites: Robotics Research Preparation (UNIVBRIS module code: AENGM0029) Technology and Context of Robotics and Autonomous Systems (UNIVBRIS module code: EMATM0018)

Features: Module Entry requirements: If offered as CPD or stand alone

Educational Aims: On successful completion of this module students will be able to:

Perform individual, original research in the field of robotics and autonomous systems.

Present research findings in written, oral, and poster formats.

Plan, execute and manage an extended piece of research.

These outcomes will be evaluated and assessed in detail as Learning Outomes

Outline Syllabus: The project module involves a critical study of recent developments in the chosen field and will result in the development and validation of a practical component or artefact that may be a method or a model, a specification, a design document, a software implementation or any other practical and usable deliverable. The production of this deliverable should involve an organised 'engineering' approach or methodology and a substantial element of originality. It is expected that the deliverable will be validated or proved and that the process by which it is produced will be evaluated critically and future work considered.

This module is delivered only to students enrolled on the joint UWE/UNIVBRIS FARSCOPE Centre for Doctoral Training programme. A list of possible dissertation titles will be offered and discussed during the module 'Technology and Context of Robotics and Autonomous Systems, a prerequisite. Subsequently, students will be expected to contact supervisors for more information, to help in their choice. An initial dissertation proposal will be submitted and evaluated for formative assessment purposes only. Guidance will be provided through the consultations with the project supervisor or, in some cases, supervisory team of two or more academics and/or industrial collaborators. Supervisory teams consisting of at least one academic from each University will be strongly encouraged. Regular meetings will be arranged by the supervisor/supervisory team to support the student's progress. Advice on the use of library and on-line resources will also be given.

Teaching and Learning Methods: This is a project module that seeks to ensure that students become autonomous learners. The student plans a series of meetings with the supervisor(s) and presents his/her project plan. The supervisory sessions require some preparation time, which might include preparing design concepts for discussions, making content plans for the dissertation chapters, drafting the methodological or practical issues at stake, discussing state of the art as reported in the relevant literature or preparing an experiment setup for demonstration. The student should also compile a list of questions prior to a supervisory meeting.

Further refining the submitted proposal topic in conjunction with an appropriate supervisor to build on previous work done in the chosen research area.

Student-centred work and research of advanced theoretical principles and methods under appropriate staff supervision

Supervisory sessions where research results will be discussed and guidance will be given by the supervisor

Critical appraisal of the different paradigms for the focused field of study, and to selection and application of appropriate research methods and techniques to this area of focus

Guided research and production of a highly focused dissertation in line with the negotiated and refined masters proposal

---

Part 3: Assessment

This module is composed of two elements: a 3000 word portfolio of research with 15 minute presentation (worth 25% of the total mark); a poster preparation and a 10,000 word dissertation with 30 to 60 minute viva voce (together worth 75% of the total mark).All learning outcomes will be assessed in the Component A.

Research Review and Presentation

The Research Review will form the framework for the dissertation. This will include a critical overview of relevant literature and a proposed design/methodology concept. A word count of approximately 3000 is suggested for this document.

The Research review will take place after submission of the portfolio of research. The presentation will be approximately 15 minutes long, followed by 10 minutes questions posed by the student's peers and staff.

The Poster, Dissertation and Viva Voce

A poster must be prepared as a supportive component of the viva voce. Its purpose is to develop skills in presenting complex information in an understandable, compact and succinct format. It will normally be a single A1 or A2 page and assessment of its quality will be encompassed with the viva voce examination.

The dissertation will normally be of 10,000 words in length. The following are a list of requirements for the presentation of the dissertation:

Identification of relevant issues for investigation;
Appropriateness of research method(s) to the investigation;
Level of conceptual and/or technical difficulty;
Depth, breadth and level of critical analysis of secondary research;
Collection and use of primary evidence;
Coherence of argument, logic and quality of conclusions (specific and general);
Quality of writing and presentation;
Awareness of any related ethical issues;
Accuracy and completeness of citation and listing of references;
Critical appraisal of the research process and outcome.

A viva voce (oral) examination will normally be carried out by the main academic supervisor and a second independent internal marker (assessor). All projects, and ensuing viva voce examinations, will be moderated by the module leader. This enables the student's understanding of the area of work and the significance of the results obtained to be determined. It also gives an opportunity for the student to explain further aspects of the work not fully clear from the dissertation, using the prepared poster as and when appropriate. This examination normally lasts between 30 and 60 minutes and is normally held at Bristol Robotics Laboratory. Examiners have the right to ask questions on any aspect of the dissertation, however, areas which are usually covered by questioning during the examination include:

the ideas and assumptions in the research;
the experimental work;
the results and their interpretations;
which parts of the thesis may not be published if covered by a confidentiality agreement.

First Sit Components	Final Assessment	Element weighting	Description
Portfolio - Component A		25 %	Research Review (3000 words) and Presentation (15 minutes)
Dissertation - Component A	✓	75 %	Dissertation (10,000 words) and viva voce (30 to 60 minutes)
Resit Components	Final Assessment	Element weighting	Description
Portfolio - Component A		25 %	Research Review (3000 words) and Presentation (15 minutes)
Dissertation - Component A	✓	75 %	Dissertation (10,000 words) and viva voce (30 to 60 minutes)

Part 4: Teaching and Learning Methods	
Learning Outcomes	On successful completion of this module students will be able to:

		Knowledge and Understanding
	A1	Of an area of robotics technology which is at the forefront of professional and/or academic practice
	A2	Of methodologies and techniques applicable to chosen research and, where appropriate, proposed new hypotheses and solutions
	A3	Current research, contemporary problems and/or new insights in areas of robotics and intelligent systems in relation to their research
		Intellectual Skills
	B1	Generating clear research question or hypothesis
	B2	Critical analysis and evaluation of current research, contemporary problems in areas of robotics and intelligent systems
	B3	Synthesizing data from relevant sources to produce meaningful and contextually relevant information and/or new insights and constructing an appropriate research methodology
	B4	Practical understanding of how techniques of research and enquiry are used to create and to interpret knowledge within the professional practice of the discipline
	B5	Methodological rigour in applying appropriate methods and techniques for problem analysis and investigation
		Subject/Professional Practice Skills
	C1	Competence in applying appropriate techniques and in interpreting the results
	C2	Ability to devise innovative solutions to the research area under investigation, integrate or devise systems or models using existing technologies and to present these solutions effectively
	C3	Ability to exercise initiative and personal responsibility in professional practice
	C4	Ability to adapt skills or develop new skills for new situations and scenarios
		Transferable Skills and other attributes
	D1	Self evaluation and self-management
	D2	Learning resources by developing awareness of professional literature
	D3	Communication by communicating results clearly to specialist and non-specialist audiences
	D4	Management of information by independent learning ability to develop new skills for continuing professional development
	D5	Autonomy by developing independent and self-critical learner
	D6	Problem Solving – independent learning ability, making professional use of others when appropriate
	D7	Group working either as a group member or a leader. Can clarify tasks and use the capacities of group members.

Contact Hours	**Contact Hours**	
	Independent Study Hours:	
	Independent study/self-guided study	650

	Total Independent Study Hours:	650
	Placement Study Hours:	
	Placement	100
	Total Placement Study Hours:	100
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	50
	Total Scheduled Learning and Teaching Hours:	50
	Hours to be allocated	800
	Allocated Hours	800
Reading List	*The reading list for this module can be accessed via the following link:* https://uwe.rl.talis.com/modules/ufmfrg-80-m.html	