MODULE DESCRIPTOR

Module Title

MSc Robotics Individual Research Investigation

Reference	ENM409	Version	1
Created	July 2024	SCQF Level	SCQF 11
Approved	April 2006	SCQF Points	60
Amended	June 2023	ECTS Points	30

Aims of Module

To develop skills in the investigation and analysis of robotics problems and creativity in devising effective solutions, through detailed research of one selected topic.

Learning Outcomes for Module

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

1	Synthesise technical and non-technical contents from across all or some areas of the MSc Robotics Programme to produce a project proposal detailing specific problems and appropriate scientific and/or engineering methodologies to solve them.
2	Critically analyse relevant literature in a specific subject area of robotics to demonstrate in-depth understanding of problems and gaps in knowledge and/or practice in the subject area.
3	Generate practical and/or theoretical solutions to a robotics problem through correct implementation of appropriate scientific and/or engineering methodologies.
4	Produce a detailed and coherent report of an original and independent research project, incorporating and justifying all aspects of the project work.

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Indicative Module Content

The project constitutes a major component of the course of study for MSc degree programmes in the School. Following a successful transition through the taught stage of the programmes and a detailed literature review of the chosen research topics, students will begin work on the project by producing a project proposal. Students are required to identify and source a project, subject to the approval of the School. Students will be encouraged and guided by the project module coordinator to produce a project brief and a plan of programme of events for consideration. Students should also make every effort to establish industrial contacts at an early stage and keep the designated supervisors up to date on progress. Early attention should be devoted to the establishment of the project as a viable concern through a detailed literature review and summary of the important aspects of the proposed study. On completion of the project practical work, students are expected to produce a detailed written report outlining the project findings to the standards specified in the Project Handbook, and detailing the important aspects of the work undertaken. The students are also supported during the module through seminars on project management, report writing, ethics and health and safety.

Module Delivery

The project will be carried out on an individual basis, with the students having access to a supervisor(s) to provide guidance and support, as required. Students are expected to meet with their supervisors regularly throughout the duration of their project work. As part of the module activities and formative assessment, students are expected to develop their project proposals and submit them for approval before starting the project implementation work. The students will be prepared for the proposal development activity and provided with vital information and advice through a project seminar facilitated by the Module Coordinator and Programme Administrator. Whilst developing their proposal, further guidance and feedback would be provided to the students by the Module Coordinator or another academic tutor as appropriate. In addition, resource materials such as the Project Handbook and exemplars of high-quality proposal and project work are available to the students on Moodle throughout the duration of their project.

Indicative Student Workload	Full Time	Part Time
Contact Hours	20	N/A
Non-Contact Hours	580	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	600	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
Description:	Thesis: students are expected to use knowledge gained over the taught modules to develop their project proposals, execute the project works and write their project thesis.				

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MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

Component 1 comprises 100% of the module grade. To pass the module, a D grade is required.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A
B	B
C	C
D	D
E	E
F	F
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

ADDITIONAL NOTES

Extensive specialised reading specific to individual projects is required. Where necessary, arrangements can be made to protect commercial confidence.

INDICATIVE BIBLIOGRAPHY

1	RGU MSc Robotics Programme, "The Robotics Programme MSc Project Handbook" and "Frequently Asked Questions" documents. (All MSc project students in Engineering are issued with copies of these documents).
2	Tanaka, M. L. 2020. A Thesis Proposal Development Course for Engineering Graduate Students; Journal of biomechanical engineering, 2020, Vol.142 (11); available online.
3	Wallwork A. 2014. User Guides, Manuals, and Technical Writing - A Guide to Professional English. Springer, New York NY.