

MODULE DESCRIPTOR

Module Title

Interdisciplinary Robotics Group Project

| | | | |
|-----------|-----------|-------------|---------|
| Reference | ENM286 | Version | 1 |
| Created | July 2024 | SCQF Level | SCQF 11 |
| Approved | June 2023 | SCQF Points | 15 |
| Amended | | ECTS Points | 7.5 |

Aims of Module

To provide the student with the ability to complete an investigation into a robotics topic and to undertake the associated design, implementation and testing as a member of a project group.

Learning Outcomes for Module

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

- 1 Analyse potential solutions to a complex robotics problem as an effective member of a group.
- 2 Design, in a team environment, the selected solution to a complex robotics problem.
- 3 Critically evaluate the performance of the proposed solution to the complex robotic problem.
- 4 Synthesise the project work through a presentation and report as part of a group.

Indicative Module Content

There is no formal syllabus for the group project in general, but seminars are used to provide guidance with regard to project management, report writing, ethics and health and safety.

Module Delivery

The group project is student-centred. Students are allocated to groups, each of which has a member of academic staff who acts as a supervisor. Regular weekly meetings take place to review progress. All students must maintain a logbook.

Indicative Student Workload

| | Full Time | Part Time |
|--|-----------|-----------|
| Contact Hours | 40 | N/A |
| Non-Contact Hours | 110 | N/A |
| Placement/Work-Based Learning Experience [Notional] Hours | N/A | N/A |
| TOTAL | 150 | N/A |
| <i>Actual Placement hours for professional, statutory or regulatory body</i> | | |

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: Group project portfolio including written report, oral presentation, and demonstration.

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. |

INDICATIVE BIBLIOGRAPHY

- 1 B. Siciliano, O. Khatib eds., ?Springer Handbook of Robotics?, Springer-Verlag, Berlin, 2016
- 2 J. J. Craig, ?Introduction to Robotics: Mechanics and Control?, 4th edition, Pearson Prentice Hall, USA, 2017
- 3 P. Corke, "Robotics and Control", Springer-Verlag, Berlin, 2022
- 4 Guidance Notes on Group Project Work, School of Computing, Engineering and Technology. (All students are given guidelines relating to the operation of the project and the structure and content of the report.)