ES327-30 Individual Project

23/24

Department
School of Engineering
Level
Undergraduate Level 3
Module leader
Gary Fowmes
Credit value
30
Module duration
25 weeks
Assessment
100% coursework
Study location
University of Warwick main campus, Coventry

Description

Introductory description

ES327-30 Individual Project

Module web page

Module aims

Projects will vary in nature from design and make to computational and research-based projects. All proposed projects should give students the opportunity to achieve the learning outcomes. The module aims to provide students with a vehicle to develop and/or integrate knowledge and skills as well as discover and (in some cases) create new knowledge using literature, experimentation or modelling and analysis where appropriate. The module also aims to reward curiosity and motivation with a satisfying experience involving close interaction with an academic supervisor.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

A project topic may be selected from published lists or, alternatively, students may themselves propose suitable topics in consultation with Personal Tutors or potential supervisors.

Project work is undertaken during the Autumn and Spring terms.

5 hours of briefings to include:

- Introduction to project management methodologies
- Keeping a logbook
- Project risk management
- Reviewing literature
- Writing the technical report

Learning outcomes

By the end of the module, students should be able to:

- Design a project defining aims and objectives.
- Evaluate risk & constraint issues including general project risks, time, uncertainty, information, data, commercial, environmental, sustainability, health, safety, security, intellectual property rights, standards and create a project plan which demonstrates appropriate risk management
- Apply and integrate knowledge and principles from a range of disciplines, including new technological developments, as appropriate to analyse and solve a problem holistically, including consideration of production, operation, maintenance and disposal.
- Comprehensively obtain, analyse and assess results and communicate feasibility of implementation to technical audiences.
- Plan and carry out a personal programme of work demonstrating project management by monitoring and adjusting throughout the project lifecycle and managing budget.
- Demonstrate professional and ethical conduct and use IT facilities to produce professional documentation.
- Reflect on the project and opportunities for skills development evaluating lessons learned and the role of the project in lifelong learning as well as planning future learning and demonstrating improvement.

Research element

Student are expected to carry out independent research / investigation within the self study hours. This may involve collecting primary data, in which case SofE ethical approval must be sought. Research for other literature / sources may be required using both resources available from the University of Warwick library or www.

Subject specific skills

Ability to recognise, conceive and realise an opportunity or challenge in an engineering context.
Ability to develop economically viable and ethically sound sustainable solutions to such an opportunity or challenge.
Ability to be consider challenges and solutions with a rational approach, taking logical and practical steps necessary for, often complex, concepts to become reality
Ability to seek to achieve sustainable and commercially viable solutions to problems and have strategies for being creative and innovative within known constraints.

Ability to be risk, cost and value-conscious, and aware of their ethical, social, cultural, environmental, health and safety, and wider professional engineering responsibilities

Transferable skills

Identify and apply suitable analysis methods leading to the recommendations optimal solutions
Apply problem solving skills, information retrieval, and the effective use of general IT facilities
Communicate complex technical and commercial concepts in both written and oral formats (to technical and non-technical audiences) .
Plan self-learning and recognise necessary performance improvements, as the foundation for lifelong learning/CPD
Exercise initiative and personal responsibility, including time management
Overcome difficulties and challenges by employing skills, knowledge and understanding in a flexible manner
Ability to formulate and operate within appropriate codes of conduct, when faced with an ethical issue
Appreciation of the global dimensions of engineering, commerce and communication
Be professional in their outlook and conduct, become effective communicators and be able to exercise responsibility and sound management approaches.

Study

Study time

Type	Required
Lectures	5 sessions of 1 hour (2%)
Seminars	(0%)
Project supervision	20 sessions of 1 hour (7%)
Private study	275 hours (92%)
Total	300 hours

Private study description

E-mails and weekly advice and feedback hour support for student questions/
Guided independent learning 275 hours

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Students can register for this module without taking any assessment.

Assessment group A5

	Weighting	Study time
Project Feasibility Study Individual 10 pages	15%	
Technical Report Project report (40 pages) and Evaluation (5 pages)	70%	
Project & Time Management Logbook	15%	

Feedback on assessment

- Ongoing feedback provided through supervisor meetings;
- Class summary of typical strengths/weaknesses (individually annotated);
- Student support through advertised advice and feedback hours & drop-in sessions;
- The technical report will be independently marked by two assessors (one being the Project Supervisor), and a third academic will act as the moderator combining feedback for the student. Comments will be given in support of project marks.

Availability

Courses

This module is Core for:

- Year 3 of UESA-H335 BEng Automotive Engineering
- Year 4 of UESA-H334 BEng Automotive Engineering with Intercalated Year
- Year 3 of UESA-H161 BEng Biomedical Systems Engineering
- Year 3 of UESA-H63W BEng Electronic Engineering
- Year 4 of UESA-H63V BEng Electronic Engineering with Intercalated Year
- Year 3 of UESA-HN12 BEng Engineering Business Management
- Year 4 of UESA-H111 BEng Engineering with Intercalated Year
- Year 3 of UESA-HH73 BEng Manufacturing and Mechanical Engineering
- Year 3 of UESA-HH75 BEng Manufacturing and Mechanical Engineering
- Year 4 of UESA-HH74 BEng Manufacturing and Mechanical Engineering with Intercalated Year
- Year 3 of UESA-H310 BEng Mechanical Engineering
- Year 3 of UESA-H315 BEng Mechanical Engineering

- Year 4 of UESA-H314 BEng Mechanical Engineering with Intercalated Year
- Year 3 of UESA-HH35 BEng Systems Engineering
- Year 3 of UESA-HH36 BEng Systems Engineering
- Year 4 of UESA-HH34 BEng Systems Engineering with Intercalated Year
- Year 3 of UESA-H336 MEng Automotive Engineering
- Year 3 of UESA-H163 MEng Biomedical Systems Engineering
- Year 3 of UESA-H217 MEng Civil Engineering
- Year 4 of UESA-H218 MEng Civil Engineering with Intercalated Year
- Year 3 of UESA-H63X MEng Electronic Engineering
- UESA-H636 MEng Electronic Engineering with Intercalated Year
    - Year 3 of H636 Electronic Engineering with Intercalated Year
    - Year 4 of H636 Electronic Engineering with Intercalated Year
- Year 3 of UESA-HH76 MEng Manufacturing and Mechanical Engineering
- UESA-HH38 MEng Manufacturing and Mechanical Engineering with Intercalated Year
    - Year 3 of HH38 Manufacturing and Mechanical Engineering with Intercalated Year MEng
    - Year 4 of HH38 Manufacturing and Mechanical Engineering with Intercalated Year MEng
- Year 3 of UESA-H311 MEng Mechanical Engineering
- Year 3 of UESA-H316 MEng Mechanical Engineering
- Year 4 of UESA-H317 MEng Mechanical Engineering with Intercalated Year
- UESA-HH31 MEng Systems Engineering
    - Year 3 of HH31 Systems Engineering
    - Year 3 of HH35 Systems Engineering
- Year 4 of UESA-HH32 MEng Systems Engineering with Intercalated Year
- UESA-H11L Undergradaute Engineering (with Intercalated Year)
    - Year 3 of H11L Engineering (with Intercalated Year)
    - Year 4 of H11L Engineering (with Intercalated Year)
- Year 3 of UESA-H605 Undergraduate Electrical and Electronic Engineering
- Year 4 of UESA-H60V Undergraduate Electrical and Electronic Engineering (with Intercalated Year)
- Year 3 of UESA-H606 Undergraduate Electrical and Electronic Engineering MEng
- Year 4 of UESA-H607 Undergraduate Electrical and Electronic Engineering with Intercalated Year

This module is Core optional for:

- Year 4 of UESA-H334 BEng Automotive Engineering with Intercalated Year
- Year 3 of UESA-H113 BEng Engineering
- UESA-H112 BSc Engineering
    - Year 3 of H112 Engineering
    - Year 3 of H112 Engineering
- Year 4 of UESA-H337 MEng Automotive Engineering with Intercalated Year
- Year 4 of UESA-H164 MEng Biomedical Systems Engineering with Intercalated Year
- Year 3 of UESA-H218 MEng Civil Engineering with Intercalated Year
- UESA-H636 MEng Electronic Engineering with Intercalated Year
    - Year 3 of H636 Electronic Engineering with Intercalated Year

    - Year 4 of H636 Electronic Engineering with Intercalated Year
- Year 4 of UESA-H63Y MEng Electronic Engineering with Intercalated Year
- Year 3 of UESA-H114 MEng Engineering
- UESA-H115 MEng Engineering with Intercalated Year
    - Year 3 of H115 Engineering with Intercalated Year MEng
    - Year 4 of H115 Engineering with Intercalated Year MEng
- UESA-HH38 MEng Manufacturing and Mechanical Engineering with Intercalated Year
    - Year 3 of HH38 Manufacturing and Mechanical Engineering with Intercalated Year MEng
    - Year 4 of HH38 Manufacturing and Mechanical Engineering with Intercalated Year MEng
- UESA-HH77 MEng Manufacturing and Mechanical Engineering with Intercalated Year
    - Year 3 of HH77 Manufacturing and Mechanical Engineering MEng with Intercalated Year
    - Year 4 of HH77 Manufacturing and Mechanical Engineering MEng with Intercalated Year
- UESA-H317 MEng Mechanical Engineering with Intercalated Year
    - Year 3 of H317 Mechanical Engineering with Intercalated Year
    - Year 4 of H317 Mechanical Engineering with Intercalated Year
- Year 4 of UESA-HH32 MEng Systems Engineering with Intercalated Year
- Year 3 of UESA-H11L Undergradaute Engineering (with Intercalated Year)
- UESA-H607 Undergraduate Electrical and Electronic Engineering with Intercalated Year
    - Year 3 of H607 Electrical and Electronic Engineering with Intercalated year
    - Year 4 of H607 Electrical and Electronic Engineering with Intercalated year