1. **Title of the module**

EENG5770 (EL577) Entrepreneurship and Professional Development

1. **Division or partner institution which will be responsible for management of the module**

 Computing, Engineering and Mathematical Sciences

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

 Level 5

1. **The number of credits and the ECTS value which the module represents**

15 credits (7.5 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

 Autumn

1. **Prerequisite and co-requisite modules**

None

1. **The courses of study to which the module contributes**

BEng Mechanical Engineering with a foundation year

BEng Mechanical Engineering

BEng Mechanical Engineering with a year in industry

BEng/MEng Electronic and Computer Engineering

BEng Electronic and Computer Engineering with a foundation year

BEng/MEng Electronic and Computer Engineering with a year in industry

BEng Biomedical Engineering with a foundation year

BEng Biomedical Engineering

BEng Biomedical Engineering with a year in industry

BSc Digital Design

BSc Digital Design with a Year in Industry

BSc Digital Design with a Year Abroad

1. **The intended subject specific learning outcomes.
On successfully completing the module students will be able to:**
	1. Identify the process of innovation, generating ideas and circular design, and how to build a team and collaborate with other team members to exploit an entrepreneurial opportunity;
	2. Analyse the lifecycle of a new technology development, and how to assess technology readiness level (TRL);
	3. Evaluate the financial performance of large-scale projects and new ventures;
	4. Develop a credible business plan and strategy roadmap for a new technology and start-up;
	5. Prototype and commercialise innovations and prepare a plan to mitigate market risks.
2. **The intended generic learning outcomes.
On successfully completing the module students will be able to:**
	1. Generate, analyse, present and interpret data and deploy them within an employment context;
	2. Communicate more effectivelyusing a variety of methods;
	3. Use a range of established techniques to initiate and undertake critical analysis of information, and propose solutions;
	4. Manage their time and resources within a task.
3. **A synopsis of the curriculum**

Introduction to entrepreneurship, creativity and innovation, circular design; Team building and effective team collaboration;

New technology development, technology lifecycle, technology readiness level (TRL); Financial management of large-scale projects and new ventures, sources of financing; Protecting and securing intellectual properties (IPs); Business planning tools for a new technology and start-up; Prototyping and commercialising a new technology and mitigate market risks.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

 Management of Technology – Tarek M. Khalil, McGraw-Hill Science, 1999.

Entrepreneurship and Small Business: Start-up, Growth and Maturity (4th edition) – Burns, P., Palgrave Macmillan. 2016, ISBN-13 :978-1137430359.

Skills Development for Business and Management Students: Study and Employability – Kevin Gallagher, OUP Oxford; 2nd edition, 2013.

1. **Learning and teaching methods**

 Contact hours 34
Private study hours 116
Total study hours 150

1. **Assessment methods**
	1. Main assessment methods

Entrepreneurial Team Pitch [20 min. group presentation, individually marked] (20%)
Group coursework [8000 words group report] (40%)

Individual reflective coursework [3 page individual report] (40%)

* 1. Reassessment methods

Like for like

1. **Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 9.1 | 9.2 | 9.3 | 9.4 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |
| **Private Study** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Lectures | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Example classes | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Workshops | **x** | **x** | **x** | **x** | **x** |  |  | **x** | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |
| Entrepreneurial Team Pitch | **x** | **x** | **x** | **x** | **x** | **x** |  |  | **x** |
| Group coursework | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Individual reflective coursework | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |

1. **Inclusive module design**

The Division recognises has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/ declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

The entrepreneurial and employment related skills learnt in this module are inherently international in their approach and relevance. Where possible, the reading list and research articles used as reading material demonstrate the diversity of backgrounds of professional engineering and creative industries teams working in the field.

**DIVISIONAL OFFICE USE ONLY**

**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 15/10/2020 |  | Sept 2021/22 |  |  |
|  |  |  |  |  |