1. **Kent Vision Code and title of the module**

EENG3050 Introduction to Electronics

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

Division of Computing, Engineering and Mathematical Sciences. School of Engineering

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

Level 4

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 programmes of study to which the module contributes**

Compulsory to the following courses:

BEng/MEng Electronic and Communications Engineering

BEng/MEng Electronic and Communications Engineering with a Year in Industry

BEng/MEng Computer Systems Engineering

BEng/MEng Computer Systems Engineering with a Year in Industry

BEng Biomedical engineering

BEng Biomedical engineering with a Year in Industry

BEng Mechanical Engineering

BEng Mechanical Engineering with a Year in Industry

1. **The intended subject specific learning outcomes.
On successfully completing the module students will be able to:**

1. recognise the fundamentals of basic electric components and circuits;

2. analyse simple electric circuits;

3. explain basic input and output electronics for microcontrollers;

4. identify a range of sensor and actuator device functions.

5. recognise ethical, environmental, and design issues in engineering.

1. **The intended generic learning outcomes.
On successfully completing the module students will be able to:**

1. analyse numerical problems

2. use computers as an engineering tool.

1. **A synopsis of the curriculum**

The module provides an introduction to the basic knowledge required to understand, design and work with basic electronic circuits and the basic principles underlying the process of Electronic Engineering. No previous electronics experience is assumed and the module proceeds via a sequence of lectures supported by simple exercises designed to give practical experience of the concepts introduced in the lectures. The underpinning aspects of professional practice are also introduced.

1. **Reading list**

The University is committed to ensuring that core reading materials are in accessible electronic format in line with the Kent Inclusive Practices.

The most up to date reading list for each module can be found on the university's [reading list pages](https://kent.rl.talis.com/index.html).

1. **Contact Hours**

Private study: 107

Contact hours: 43

Total: 150

1. **Assessment methods**
	1. Main assessment methods
	* Best 4 out of 5 two hour laboratory assignments (30%)
	* Best 8 out of 10 quizzes (40%)
	* 10 tutorials (10%)
	* One day mini-project Conceive-Design Assignment (20%)
	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* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |
| Private Study | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Lectures | **x** | **x** | **x** | **x** |  | **x** | **x** |
| Tutorials |  |  |  |  | **x** |  |  |
| Assignments | **x** |  | **x** | **x** |  | **x** | **x** |
| **Assessment method** |  |  |  |  |  |  |  |
| Assignments | **x** |  | **x** | **x** |  | **x** | **x** |
| Tutorials |  |  | **x** | **x** | **x** | **x** |  |
| Quizzes | **x** | **x** |  |  |  | **x** | **x** |
| Design Mini-Project |  |  |  |  | **x** |  |  |

1. **Inclusive module design**

The Division recognises and 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**

Electronic engineering in a global activity using internationally standardized techniques for characterization and analysis.

Internationally recognised and available texts are used.

**DIVISIONAL USE ONLY**

**Module 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 the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 30/06/16 | Major | September 2016 | 9-12, 14 | No |
| 11/04/2022 | Minor | September 2022 | 8, 13, 14 | No |
| July 2023 | Minor | September 2023 | 10, 12, 13, 14 | No |
|  |  |  |  |  |
|  |  |  |  |  |