1. **Title of the module**

EENG0025 (EL025) Electrical Principles and Measurements

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

Engineering and Digital Arts

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

Level 3

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

15 (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**

EL026 Analogue Electronics Co-requisite

PH020 Algebra and Arithmetic or Equivalent Co-requisite

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

BEng Computer Systems Engineering including a Foundation Year

BEng Electronic and Communications Engineering including a Foundation Year

1. **The intended subject specific learning outcomes.  
   On successful completion of the module, students should have:**
   1. A knowledge of general measurement theory;
   2. A knowledge of basic electronic measurement and test equipment;
   3. An understanding of basic electrical circuit quantities and laws;
   4. The basic ability to estimate errors in measurements;
   5. The ability to use basic electronic measurement equipment.

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

9.1 generate, analyse, present and interpret data.

9.2 be able to communicate more effectively in writing.

1. **A synopsis of the curriculum**

DC CIRCUITS

Electrical quantities, circuit theory, circuit calculations and theorems.

MEASUREMENTS

General measurement theory

Use of electronic instruments

REPORT WRITING

Structure of reports, treatment of errors, conclusions

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

ROBERTSON, Christopher R., 1993. Electrical and electronic principles: 1. London: E. Arnold. ISBN 0340579188.

1. **Learning and teaching methods**

47 contact hours consisting of lectures, laboratory classes, example classes and in-course test.

103 hours of private study

Total hours for the module will be 150.

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

25% laboratory reports – typically 10 hours

5% homework and in-course test (1 hour)

70% exam. The exam duration will be 2 hours

13.2 Reassessment methods

***Like for like re-assessment***

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** |  |  |  |  |  |  |  |  |
| *Example classes* | **x** | **x** | **x** |  |  |  |  |  |
| *Laboratory* | **x** | **x** | **x** | **x** | **x** |  | **x** | **x** |
| *Lectures* | **x** | **x** | **x** | **x** |  |  |  | **x** |
| *Test* | **x** | **x** | **x** |  |  |  |  |  |
| **Assessment method** |  |  |  |  |  |  |  |  |
| *In course test* | **x** | **x** | **x** |  |  |  |  |  |
| *homework* | **x** | **x** | **x** |  |  |  |  |  |
| *Laboratory reports* | **x** | **x** | **x** | **x** | **x** |  | **x** | **x** |
| *Examination* | **x** | **x** | **x** | **x** |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

1. **Inclusive module design**

The School 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**

The International System of Units (SI or *Système international (d'unités)*) are used throughout this module.

**FACULTIES SUPPORT 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 the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 15/02/18 | Major | September 2018 | 10, 12, 13 | No |
|  |  |  |  |  |