1. **Title of the module**

EENG0033 (EL033) - Introduction to Programming using MatLab

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 credits (7.5 ECTS)

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

Autumn and Spring

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

Co-requisite modules:

* EENG0021 - Calculus
* MAST0022 - Graphs and Geometry
* PHYS0020 - Algebra and Arithmetic or equivalent

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

* BEng Electronics and Communications Engineering with a Foundation Year
* BEng Computer Systems Engineering with a Foundation Year
* BSc Mathematics with a Foundation Year

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to:**
2. use the MatLab programming environment;
3. design and implement in MatLab a solution according to a program specification;
4. Understand the principles of the software engineering process.
5. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to:**

1. use ICT effectively

2. manage time effectively

1. **A synopsis of the curriculum**

This module introduces MATLAB as a technical programming language. As programming skills are essential for modern scientific and engineering work, and MATLAB is becoming an important tool for technical computations, this module enables students to cover both these requirements simultaneously. It provides students with an effective understanding of programming concepts and techniques as well as the basic software engineering process required to develop solutions to given problems using the MATLAB environment. Reflecting the need to appreciate both the functionality of programming structures and the issues involved in programming implementations the course is organised in a series of alternating theoretical lectures and practical, problem driven, terminal sessions.

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

* Essentials of MATLAB programming, S.J. Chapman, Thomson Engineering, 2006, ISBN 0495073008
* Getting Started with MATLAB 7, R. Pratap, Oxford University Press, 2006, ISBN 97809195179378

1. **Learning and teaching methods**

Total contact hours: 42

Private study hours: 108

Total study hours: 150

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

* Terminal exercise 1 – 15%
* Terminal exercise 2 – 17%
* Terminal exercise 3 – 17%
* Terminal exercise 4 – 17%
* Terminal exercise 5 – 17%
* Terminal exercise 6 – 17%

13.2 Reassessment methods

Reassessment instrument: 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 | 9.1 | 9.2 |
| **Learning/ teaching method** |  |  |  |  |  |
| Lectures | **x** |  | **x** | x |  |
| Terminal based exercises |  | **x** |  |  | x |
| Private study | x | x | x | x | x |
| **Assessment method** |  |  |  |  |  |
| Terminal exercises | **x** | **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**

MATLAB is a technical programming language that is used in industry and academia world wide.

**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) |
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Revised FSO Jan 2018