1. **Title of the module**

DIGM5420 (EL542) Tangible Media

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)**

Spring

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

None.

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

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. Develop an original idea on a given theme, research it and visualise it in interactive form

2. Evaluate critically a wide range of interactive methods, visual styles, and choose the best suited to the intention of a particular topic

3. Implement and develop interactive systems through visual display and tangible interface

4. Use appropriate software tools to create professional interactive tangible media

5. Develop an understanding and appreciation of future media technologies

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

1. Be proficient in the use of ICT

2. Develop personal and interpersonal skills, working as a member of a team

3. Communicate effectively through media

4. Work in a creative way

5. Organise and manage time and resources

1. **A synopsis of the curriculum**

This undergraduate module introduces the practical techniques for creating interactive visual display using Processing, a Java-based IDE. We will also develop interesting tangible interfaces using Arduino IDE, with a range of sensors and actuators. Students will learn to manipulate images, create realistic motions, use motion sensing and speech recognition, in a series of lectures and workshops.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**
* Shiffman, D (2012). Nature of code. ISBN: 0985930802. Full e-book available : http://natureofcode.com/
* Banzi, M( 2011) Getting started with Arduino. Maker Media. ISBN: 1449309879
* Reas, C & Fry, B (2010) Getting started with Processing. Maker Media. ISBN: 144937980X
1. **Learning and teaching methods**

Total contact hours: 29

Private study hours: 121

Total study hours: 150

1. **Assessment methods**
	1. Main assessment methods
* Workshop exercises 20% - 10 hours
* Project and video presentation 70% - 100 hours
* Class quiz 10% - 1 hour

13.2 Reassessment methods

Reassessment instrument: 100% coursework

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 | 9.5 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |
| Private Study | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Lectures  | **x** | **x** | **x** | **x** | **x** |  |  |  |  |  |
| Workshops  |  |  | **x** | **x** |  | **x** | **x** |  |  |  |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |
| Workshop exercises |  |  | **x** | **x** |  | **x** | **x** |  |  |  |
| Final Project and video presentation | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Class quiz |  |  | **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**

Learning and teaching materials draw from research and development from the international community, and this aspect will be highlighted in the module.

**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 the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 10/12/18 | Minor | September 2019 | 1 | no |
| December 2020 | Major | September 2021/22 | 5,6,7,8,13 | Yes |