

Course Code:

EXT1019

Academic Session

2017/18

1. Course Title:

Product Design Engineering 1 (EXT1019)

2. Version

1.1

Date of Production/ Revision

Session 2016/17

Approval Date

30 Aug 2017 PACAAG

3. Level:

1

4. Credits:

20

5. Lead School/Board of Studies:

School of Design

6. Course Contact:

Ben Craven

7. Course Aims:**Aim – General**

- By the end of level 1, you will be expected to have achieved the learning outcomes of an introductory programme of Studio and University activity and the confidence gained from application of Product, Process and Presentation.
- The PDE team aims to provide a diagnostic experience for students to establish an achievable learning plan and approach for the session.
- To develop critical and reflective skills, in addition to a theoretical and practical approach to the field.

Aims - Specific

- To develop, at a fundamental level, confidence in: drawing; 3D Form; knowledge and understanding; communication, terminology and presentation skills; interactive and group skills, project management; analytical, problem-solving, synthesis, evaluative and application skills; design processes, materials manufacturing methods and tools
- To introduce students to technologies associated with Product Design Engineering and relative

fields

8. Intended Learning Outcomes of Course:

In addition to the 3P's (Product, Process and Presentation) listed in the Programme Specification, students will be reviewed or assessed on the work, as presented in their project documentation, that evidences level of engagement with and the quality of achievement of the intended learning outcomes for PDE1 listed here:

- Demonstrate ability to take a problem or challenge and develop a solution that meets this problem or challenge.
- Demonstrate ability to use freehand drawing, desktop modelling, and workshop skills as part of an effective and creative design process.
- Demonstrate ability to combine images and text on paper as an integral part of your design process and as a way of presenting your work to others.
- Have an elementary awareness of the properties of different materials and components and their appropriate and efficient use.
- Demonstrate ability to manage your time, when working individually and in teams, in order to produce a given result in a specified time
- Demonstrate ability to properly use some assistive techniques for creativity, concept generation, evaluation and selection
- Demonstrate an awareness of the possibilities offered by embedded computing in products, and will have had experience in using the fundamental concepts of computer programming
- Apply the design process to a range of set design problems addressing user needs and technical requirements.

9. Indicative Content:

Examples of the Level 1 studio syllabus

- Drawing
 - *analytical drawing / 3D form*

- *Perspective, 2point and 3 point and Rendering*
- *location and context drawing*
- *CAD*
- 3D Form
 - *model-making*
 - *structures*
 - *Form and Function: Human support*
- Design Methods
 - *brainstorming*
 - *creative tools*
 - *focus boards*
- Design, Build and Test
 - *Vehicle Olympics (team project)*
 - *Toy Story*

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| 10. Description of Summative Assessment: |
| The main aspects of Summative assessment are: written assignments, practical projects, presentations |
| 10.1 Please describe the Summative Assessment arrangements: |
| The completed Product Design Engineering 1 assignments and project outcomes will for the basis for the summative assessment. The final grade will submitted to the University of Glasgow, School of Engineering Exam Board. |

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| 11. Formative Assessment: |
| Student and peer feedback is offered throughout project with detailed feedback provided after interim presentation. The main areas of student engagement are: seminars, critiques, workshops, tutorials |
| 11.1 Please describe the Formative Assessment arrangements: |
| After most assessment events, studio staff provide feedback. The purpose of this is to help students understand areas of strength and weakness and provide advice for future direction or further learning. Feedback for PDE1 will consist of verbal comments made during studio critique or presentation, or one-to-one in the studio. Main assessment events will be followed-up by written feedback, accompanied by a tutorial discussion with studio staff. |

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| 12. Collaborative: | |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 12.1 Teaching Institutions: | |
| Glasgow School of Art | |

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| 13. Requirements of Entry: |
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None

14. Co-requisites:

None

15. Associated Programmes:

Product Design Engineering

16. When Taught:

Semester 1&2

17. Timetable:

Monday 09:00-17:00 this is dedicated studio time. Access to studio and workshops may be offered outwith this time.

18. Available to Visiting Students: Can this course be taken by visiting students? Please tick either yes or no.

Yes

No

19. Distance Learning:

Yes

No

20. Placement:

Yes

No

21. Learning and Teaching Methods:

| Method | Formal Contact Hours | Notional Learning Hours (Including formal contact hours) |
|--------------------------------|----------------------|---|
| Lecture | 10 | 10 |
| Studio | 10 | 150 |
| Seminar/Presentation | 5 | 10 |
| Tutorial | 9 | 10 |
| Workshop | 1 | 15 |
| Laboratory work | | |
| Project work | | |
| Professional Practice | | |
| E-Learning / Distance Learning | | |
| Placement | | |
| Examination | | |
| Essay | | |
| Private Study | Not Applicable | |
| Other (please specify below) | | 5 |

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|--------------|-----------|------------|
| TOTAL | 35 | 200 |
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22. Description of "Other" Teaching and Learning Methods:

Industrial and Site Visits

23. Additional Relevant Information:

24. Indicative Bibliography:

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|---------------------|---------------------------------------|
| Lidwell, Holden, | Butler Universal Principles of Design |
| Rodgers, Milton, | Product Design |
| Powell, Dick | Presentation Techniques |
| Norman, Donald | The Design of Everyday Objects |
| Austin, Ben | Techniques in Sketching |
| Taschen (publisher) | A-Z handbook of Design |
| Spark, Penny | The Genius of Design |
| Branstom, David | Basics Product Design Series |

Date of production / revision

March 2017