

Course Code:

TBC

1. Course Title:

Product Design Engineering 5M (EXT4020)

2. Academic Session:

2011-12

3. Level:

5

4. Credits:

60

5. Lead School/Board of Studies:

School of Design

6. Course Contact:

Nick Bell

7. Course Aims:

Aim – General

- By the end of Level 5, you will be expected to have developed the knowledge and skill base acquired during the previous levels, and to have achieved the learning outcomes sufficiently to undertake enhanced, negotiated self-directed studio projects and University study. These projects will potentially involving a degree of external professional collaboration.

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Aims – Specific

- To develop the ability to undertake and manage a studio-based, user-centred design project, including the design, engineering, development, testing, evaluation and prototyping of an appropriate product, to an enhanced, professional and accredited level.
- To develop the ability to work in an effective, confident and autonomous manner.
- To develop confidence and proficiency in all aspects of the practical and reflective design process to a level where these skills can be transferred to a commercial/ professional working situation.

- To demonstrate an ability of produce a summary of a year long project that follows a specific format and addresses key requirements.

8. Intended Learning Outcomes of Course:

In addition to the 3P's, 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 PDE5M listed here.

- Carry out focused research and investigations.
- Apply the design engineering process to a range of design problems addressing user needs and technical requirements.
- Design products that support a user experience within a social context.
- Apply a range of engineering knowledge and technical skills to resolve a design problem in a *real* situation.
- Design and evaluate concepts and take through to a final detailed design.
- Competently manage a project over an extended period of time and effectively manage your relationship and communication with project collaborators.
- Present and communicate your design project clearly and concisely through the appropriate use of text, visualisations and illustrations, models, prototypes and engineering drawings.

9. Indicative Content:

The final PDE studio project is student directed and negotiated with staff at the Glasgow School of Art and University of Glasgow. The studio design journal accounts for 75% of the grade, the remaining 25% is for the Technical Report. The final year studio can be described in 4 phases:

Discovery: *Investigation and Understanding*

Definition: *Concept Development*

Develop: *Final Concept Detail Design*

Deliver: *Final Concept Design Implementation*

These phases are critical delivery points that are the main focus of the final project.

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 4B project outcome and Technical Report will for the basis for the summative assessment. The final grade will be submitted to the University of Glasgow, School of Engineering Exam Board.

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 PDE4 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.

12. Collaborative:Yes No **12.1 Teaching Institutions:**

Glasgow School of Art & University of Glasgow

13. Requirements of Entry:

PDE3

14. Co-requisites:

None

15. Associated Programmes:

Product Design Engineering

16. When Taught:

Semester 1&2

17. Timetable:

Days of delivery depend on semester timetable. Tutorial days are every second Friday.

18. Available to Visiting Students: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 | 20 | 20 |
| Studio | 20 | 400 |
| Seminar/Presentation | 20 | 20 |
| Tutorial | 10 | 10 |
| Workshop | | 100 |
| Laboratory work | | |
| Project work | | |
| Professional Practice | | |
| E-Learning / Distance Learning | | |
| Placement | | |
| Examination | | |
| Essay | | |
| Private Study | Not Applicable | 50 |
| Other (please specify below) | | 0 |
| TOTAL | 70 | 600 |

22. Description of "Other" Teaching and Learning Methods:

N/A

23. Additional Relevant Information:

N/A

24. Indicative Bibliography:

| | |
|---------------------------|--|
| Manzini, Ezio | The Material of Invention |
| Flusser, Vilem | The Shape of Things, A Philosophy of Design |
| Beukers, A & van Hinte, E | Lightness, the inevitable renaissance of minimum energy structures |
| Pheasant, Stephen | Bodyspace |
| Dreyfuss, Henry | Humanscale |