THE GLASGOW SCHOOL OF ART	**Course Specification**

Course Code:	**Session:**
EXT2076	2017/18

1. Course Title:
Product Design Engineering 2 (EXT2076)

2. Version:	**Date of Production/ Revision**	**Approval Date**
1.1	2016/17	30 August 2017 PACAAG

3. Level:
2

4. Credits:
30

5. Lead School/Board of Studies:
School of Design

6. Course Contact:
Craig Whittet

7. Course Aims:

Aim – General

- By the end of Level 2, students will be expected to have developed the knowledge and skill base acquired during the previous level, and to have become conversant in and having achieved the learning outcomes of an intermediate programme of Studio and University activity.

Aims - Specific

- To enhance the knowledge and skill base acquired in Level 1 and to develop an imaginative and speculative approach to achieving product solutions, through applying a formal design process
- To develop and apply creative practice through visualisation and realisation of ideas
- To develop ability in applying skills and knowledge gained from taught University subjects, particularly in the practice of developing engineered products for defined user needs and

markets.

- To further develop a critical, evaluative and reflective design process, in addition to a theoretical appreciation of design.
- To develop skills and apply tools that assist in managing projects at an individual and team level.
- Professional skills: Leadership, teamwork, motivation, influencing, negotiation and communication

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 PDE2 listed here:

- Apply the design engineering process to a range of set design problems addressing user needs and technical requirements.
- Design products that support a user experience within a specified context.
- Apply a range of engineering knowledge and technical skills to resolve a design problem in a *real* situation.
- Work effectively in a team as well as individually; exercising initiative and taking account of own as well as others' roles and responsibilities.
- Present and communicate your design project clearly and concisely through the appropriate use of text, visualisations and illustrations, models and prototypes.

9. Indicative Content:

Example of the Level 2 studio syllabus

- identity1
    - *Reverse engineering*
    - *Human Factors*
    - *User Expectations*
    - *Exploded view*
    - *Materials, components and technology*
    - *Manufacturing and assembly/subassembly structures*
    - *Product analysis*
    - *User expectations and experience, human factors*
- identity2
    - *brand and visual identity*
    - *Aesthetics*

- *user awareness*
- *company philosophy*
- *presentation techniques*
- *Consumer / market awareness*

- identity3
  - *visualisation of creative themed conceptual product*
  - *orthographic drawing*
  - *design process*
  - *rendering and drawing, materials and techniques*
  - *Working to a design brief*
  - *Creativity and innovation techniques*
  - *Problem solving and synthesis*
  - *CAD*
  - *Presentation and recording of process*

- Design, Build and Test, Project: Hydro do that?
  - *Complete design process*
  - *Team working and professional collaboration*
  - *Project/Product management, organisation, project planning, controlling a project, communication*
  - *Understand the product life cycle and consider the long environmental impacts*
  - *Technological investigation and applications*
  - *Applying basic engineering principles and mechanisms*
  - *Product Costings*

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 2 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.

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 PDE2 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	

13. Requirements of Entry:
PDE1

14. Co-requisites:
None

15. Associated Programmes:
Product Design Engineering

16. When Taught:
Semester 1&2

17. Timetable:
Tuesday 09:00-17:00 is the dedicated studio time. Access to studio and workshops may be offered out with 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	20
Studio	15	150
Seminar/Presentation	7	20

Tutorial	3	15
Workshop		75
Laboratory work		
Project work		
Professional Practice		
E-Learning / Distance Learning		
Placement		
Examination		
Essay		
Private Study	Not Applicable	
Other (please specify below)	15	20
TOTAL	**50**	**300**

22. Description of "Other" Teaching and Learning Methods:
Group Critique, Industrial and Site Visits

23. Additional Relevant Information:

24. Indicative Bibliography:	
Lefteri, Chris	Materials for Inspirational Design series: Plastics, Metals, Wood, Glass, Ceramics
Byers,Mel	The '50' series – e.g. 50 sportswear
Ashley, Mike & Johnson, Kara	Materials and Design
(BSI 8888)	Engineering Drawing Practice for Schools and Colleges
Hudson, Jennifer	Process
Kunkell, Paul	Apple Designs
Platt,Charles	Make series
Pugh, Stuart	Total Design
Thomson, Rob	Manufacturing Processes for Design Professionals
Spark, Penny	The Genius of Design
Sudjic, Deyan	Cult Objects
Walker, Derek	Great Engineers
Wright, Ian	Design Methods in Engineering and Product Design