

Academy of Visual Arts
Bachelor of Arts (Hons) in Visual Arts Programme

VART3257 Product Design (S)

No. of units: 3

Pre-requisite: VART2255 Design Thinking or VART2257 Prototyping

Duration: 52 hours

Cluster: Object & Environment

I.1. Course Description & Rationale:

Steve Jobs, founder and CEO of Apple, said that “Some people think design means how it looks. But of course, if you dig deeper, it's really how it works.”

Product design is a creative discipline, which combines art and technology, ideas and materials, to improve our daily lives, protect our health and create new opportunities for the industry. It is the intention of this course to exactly foster this kind of imaginative design ideas and solutions that will make the world not only a more beautiful, but also a better place.

For this purpose the course will extend students' knowledge of materials and processes – especially in applied technologies like 3D-printing – and support students to develop their ideas through several stages of exploration, testing and re-developing to ultimately come up with artefacts that are conceptually sound, technically and economically feasible, yet also e.g. ecologically sustainable.

Students will understand that the right choice of materials in combination with the appropriate processes in design and production are inseparably linked to the look and performance of any product.

I.2. Course Content:

| No. | | Hours | % |
|-----|---|-------|------|
| 1. | Materials and Processes: - Considerations in selecting materials; - Innovative materials; - Techniques and technologies; - Industrial production processes; - Alternative manufacturing processes. | 12 | 23.1 |
| 2. | Ideation: - Identifying design problems; - Idea development and conceptualisation; - Prototyping and testing. | 16 | 30.8 |
| 3. | Production and Assembly of Products: - Product integrity; - Parts and pieces; - Assembly sequencing; - Production lines. | 12 | 23.1 |
| 5. | Research in Product Design: - Material libraries; - Factory experience; - User research and usability. | 12 | 23.1 |
| | | 52 | 100 |

I.3. Intended Course Learning Outcomes (CILOs):

(Please take note of the PILOs for the overall BA programme in the Programme Document.)

Upon successful completion of this course, students should be able to:

| No. | Intended Course Learning Outcomes (CILOs) |
|-----|--|
| 1. | Compare advantages and disadvantages of materials for particular applications and new product development; |
| 2. | Choose materials and respective processes appropriate for a particular new design; |

| | |
|----|--|
| 3. | Conceptualise a new design up to prototype stage; |
| 4. | Theorise mass-production processes for a design prototype; and |
| 5. | Adhere to standards of professional practice and ethos. |

** More may be added.*

I.4. Alignment of CILOs with PILOs:

| Learning Outcomes | Please indicate alignment by checking '✓' the appropriate box | | | | | |
|-------------------|---|-------|-------|-------|-------|-------|
| | CILO1 | CILO2 | CILO3 | CILO4 | CILO5 | CILO6 |
| PILO1.1 | | | | | | |
| PILO1.2 | ✓ | | ✓ | ✓ | | |
| PILO2.1 | | ✓ | | | | |
| PILO2.2 | | | ✓ | | | |
| PILO2.3 | | | | ✓ | | |
| PILO3.1 | | | | | ✓ | |
| PILO3.2 | | | | | ✓ | |

** There may not be 6 CILOs, in which case, just leave columns empty.*

I.5. Alignment of Teaching and Learning Activities with CILOs:

| No. | Teaching and Learning Activities | CILO | Hours |
|-----|---|---------|-------|
| 1. | Lectures: Lectures and other forms of presentations with aid of notes and audio-visual media will provide the students with general introductions to topics related to the field as well as familiarise them with other basic knowledge in the area. In any case, these lectures are intended only as initial stepping-stones encouraging further individual inquiry and exploration. Lectures will usually be backed up by exercises, workshops and demonstrations to solidify their impact. | 1-5 | 12 |
| 2. | Presentations and Studio critiques: Formal presentations provide students with platforms to communicate about their creative output and to put it into a larger context. Students present their achievements to the | 3, 4, 5 | 12 |

| | | | |
|----|--|---------|----|
| | class, explaining and defending it against critique. | | |
| 3. | Workshops: Workshops introduce and exercise initial practical skills and techniques in selected areas of creative production, allowing students to experientially and experimentally apply their knowledge to be able to more directly and closely connect with it. | 1, 2, 5 | 8 |
| 4. | Studio-Practice: Studio practice including exercises, tutorials, and class discussions provides opportunities to students to apply their knowledge, and practice their skills hands-on on their personal work. | 4, 5 | 12 |
| 5. | Site Visits: Visit to a site of relevance accompanied by external professionals, allowing the students to connect their learnt knowledge and skills with professional reality. | 2, 4, 5 | 8 |

**More may be added.*

I.6. Assessment:

| No. | Assessment Methods/Activities | Weighting | Alignment with CILOs |
|------------|--|------------------|-----------------------------|
| 1. | Research Presentation: Students are expected to present their research and considerations on their choice of materials and processes of production for their project. | 10% | 1 |
| 2. | Design Prototypes: The students are to produce a small number of in class projects. The works will be assessed for: - Craftsmanship and structural integrity of work produced; - Balance between design of file and material outcome; - Originality of design idea; - Conceptual development and detailing of the product. | 50% | 2, 3 |

| | | | |
|----|---|-----|---|
| | | | |
| 3. | <p>Production Plan:</p> <p>Students need to elaborate how they intend to adapt their prototype(s) for industrial mass-production, e.g. by explain specific production processes or assembly procedures.</p> | 10% | 4 |
| 4. | <p>Professional Attitude:</p> <p>Professional Attitude does not necessarily define its own learning outcomes, but takes a look at ‘how’ the other, non-attitudinal outcomes are achieved. Assessment will always be based on direct personal contact with the student.</p> <p>Assessment methods include personal conversations – formal and informal –, class observation, individual and group-tutorials, and such like. Assessment evidence is continuously produced through attendance and participation class-records, public presentations, peer-reviews, evaluation of sketchbooks or visual diaries, personal notes of students and teachers, etc.</p> <p>For more information, please refer to the BA (Hons) in Visual Arts’ Programme Document.</p> | 30% | 5 |

*More may be added.

I.7. References:

Asby, Michael, and Kara Johnson. *Materials and Design, Second Edition: The Art and Science of Material Selection in Product Design*. Oxford: Butterworth-Heinemann, 2009.

Beylerian, George, and Andrew Dent. *Ultra Materials: How materials innovation is changing the world*. New York, N.Y.: Thames & Hudson, 2007.

Fuad-Luke, Alastair. *EcoDesign: The Sourcebook*. London: Thames & Hudson, 2011.

Garner Steve. *Design and Designing: A Critical Introduction*. Oxford: Berg Publishers, 2012.

Greene Jay. *Design is How It Works: How the Smartest Companies Turn Products into Icons*. Portfolio Hardcover, 2010.

Lefteri, Chris. *Making it: Manufacturing Techniques for Product Design*. London: Laurence King, 2012.

MatériO. *Material World 3: Innovative Materials for Architecture and Design*. Amsterdam: Frame Publishers, 2011.

Terstiege Gerrit. *The Making of Design: From the First Model to the Final Product*. Basel: Birkhäuser Architecture, 2009.

Thompson, Rob. *Manufacturing Processes for Design Professionals*. New York: Thames & Hudson, 2007.

Thompson, Rob. *Prototyping and Low-Volume Production (The Manufacturing Guides)*. New York: Thames & Hudson, 2011.

I.8. Academic Integrity:

Students will endeavour to only claim work that they have actually produced themselves.

Claiming the work of others is considered plagiarism, and will be dealt with under the academic policies of the university.

I.9. Health and Safety:

Every effort will be made to comply with the intent of Hong Kong's law or acts and the University's policies to maintain a safe and healthy working environment.

I.10. Final Note:

The instructor reserves the right to modify the class and the syllabus or the schedule to adjust to the dynamics of the particular group or to take advantage of opportunities that may arise.