<table>
<thead>
<tr>
<th>Subject Code</th>
<th>ITC1001</th>
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<tbody>
<tr>
<td>Subject Title</td>
<td>Design and Applied Technology</td>
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<tr>
<td>Credit Value</td>
<td>3</td>
</tr>
<tr>
<td>Level</td>
<td>1</td>
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<tr>
<td>Pre-requisite/ Co-requisite/ Exclusion</td>
<td>Nil</td>
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### Objectives
This subject is designed for all students as an introductory subject in design and applied technology. It aims to provide students with an understanding of the fundamental knowledge and skills in design and technology, and to cultivate in them a sense of innovation and entrepreneurship necessary to face a society of rapid economic and technological changes.

### Intended Subject Learning Outcomes
Upon completion of the subject, students will be able to:
1. become independent thinkers and innovative problem-solvers;
2. acquire a good understanding of the practical skills and knowledge in technology and design;
3. identify needs, wants and opportunities for improving the quality of living;
4. develop design and technological responses as well as a sense of entrepreneurship; and
5. become discriminating, informed and responsible users of products, and develop their awareness of the interplay between technology and innovation.

### Subject Synopsis/ Indicative Syllabus

#### Keyword Syllabus (Indicative):

1. **Design and Innovation**
   - Design in Practice - design fundamentals; design process; creativity in design; project management and teamwork; roles and positions of designers and engineers;
   - Design and Communication - project presentation and report; visual representation; physical, graphical, and mathematical, and computer modeling;
   - Design Considerations – design brief and specifications; solving design problems; human and environmental factors; product standards; design evaluation.

2. **Technological Principles**
   - Nature of Technology - innovation and technology; energy and energy resources; materials and standard components;
   - Production Processes - health and industrial safety; tools, equipment and machinery; manufacturing systems;
   - Systems and Control - input-process-output; logic gates; mechanical systems; physical structure; basic electronics.

3. **Value and Impact**
   - Values in Technology and Design - the changing roles of the designers and engineers in society; Intellectual property; product evaluation; environmental responsibility; appropriate technology;
   - Historical and Cultural Influences - evolution of craft and design; design and culture; new technology;
   - Entrepreneurship and Enterprise – competitive edge of Hong Kong; design to meet market aspirations; design strategies.
Teaching/ Learning Methodology

The subject comprises of lectures and tutorials. Lectures and tutorials are used to impart knowledge of design and technology. Exercises will largely be problem based where students will be given a scenario as a background on which to focus the various topics of the subject. Topics for discussion will direct students' attention to a variety of reference materials. Critical analysis of existing examples of good and poor designs of applied technology in the today's living will be included. This will be followed by group discussions and practical work, in which the students will suggest solutions to the problems and have their opinions shared, with staff providing guideline and opinions. Other activities will involve brainstorming, group discussions, debates, presentation and a certain degree of practical work. The assignments and guided reading are to complement the content being taught.

<table>
<thead>
<tr>
<th>Specific Assessment Methods/Tasks</th>
<th>% Weighting</th>
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<tbody>
<tr>
<td>1. Continuous Assessment</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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The continuous assessment comprises of assignments and student presentations. The assignments are used to assist the students to reflect and review on their progress and as well as to assess the knowledge acquired by the students and their ability to apply and extend such knowledge.

Student Study Effort Expected

Class contact (time-tabled):

- Lecture: 14 Hours
- Studio work and Workshop: 28 Hours

Total student study effort: 42 Hours

Reading List and References

Reference List:

11. Craft, design and technology, Unit 4 [videorecording] / Thames Television Ltd.