

**JABATAN/ DEPARTMENT OF MECHANICAL ENG.
RANGKA KURSUS/ COURSE OUTLINE/SSG**

1.	NAME OF COURSE	PRODUCT DESIGN 1																		
	COURSE CODE	DJD11012 <i>Version: 230419_2_Effective: December2019</i>																		
2.	SYNOPSIS	PRODUCT DESIGN 1 covers the history of design and the basic principles of design. Student will learn the fundamental concepts for designing the products. Students also acquire analytical thinking through critic sessions. This course also provides the basic knowledge for graphic aids presentation and present the economic and environment impact on design development.																		
3.	CREDIT VALUE	2																		
4.	PREREQUISITE/ CO-REQUISITE (IF ANY)	None																		
<p>COURSE LEARNING OUTCOMES (CLO): Upon completion of this course, students should be able to:</p> <table border="1"> <tr> <td>CLO1</td> <td>Capture the history of product design and philosophy behind the design and manufactured products. (C3, PLO1)</td> </tr> <tr> <td>CLO2</td> <td>Display the basic element knowledge and principles of design in the artwork. (P4, PLO5)</td> </tr> <tr> <td>CLO3</td> <td>Present the economic and environment impact on design development. (A3, PLO7)</td> </tr> </table>			CLO1	Capture the history of product design and philosophy behind the design and manufactured products. (C3, PLO1)	CLO2	Display the basic element knowledge and principles of design in the artwork. (P4, PLO5)	CLO3	Present the economic and environment impact on design development. (A3, PLO7)												
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5.	<p>PROGRAMME LEARNING OUTCOMES (PLO):</p> <p>PLO 1: apply knowledge of applied mathematics, applied science, engineering fundamentals and an engineering specialization as specified in DK1 to DK4 respectively to wide practical procedures and practices;</p> <p>PLO 5: apply appropriate techniques, resources, and modern engineering and IT tools to well-defined engineering problems, with an awareness of the limitations (DK6);</p> <p>PLO 7: understand and evaluate the sustainability and impact of engineering technician work in the solution of well-defined engineering problems in societal and environmental contexts (DK7);</p>																			
6.	<p>ASSESSMENT METHOD: The course assessment is carried out only ONE section: i. Coursework Assessment (CA) – 100% Coursework is continuous assessment that measures knowledge, practical skills and generic skills.</p> <table border="1"> <thead> <tr> <th>Assessment</th> <th>Quantity</th> <th>Percentage (%)</th> </tr> </thead> <tbody> <tr> <td>Quiz</td> <td>1</td> <td>5%</td> </tr> <tr> <td>Practical Task</td> <td>4</td> <td>60%</td> </tr> <tr> <td>Presentation</td> <td>1</td> <td>10%</td> </tr> <tr> <td>Report</td> <td>1</td> <td>10%</td> </tr> <tr> <td>Project</td> <td>1</td> <td>15%</td> </tr> </tbody> </table>		Assessment	Quantity	Percentage (%)	Quiz	1	5%	Practical Task	4	60%	Presentation	1	10%	Report	1	10%	Project	1	15%
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TEACHING SCHEDULE:

Topic No.	Topic/Content	Recommended Contact Hours	Assessment Method	Week
5.0	INTRODUCTION TO SOFTWARE APPLICATION 5.1 Identify the types of digital images 5.2 Identify the types of images quality 5.3 Identify the color mode 5.4 Identify a basic procedure for scanning images 5.5 Identify various editing techniques: 5.6 Construct drawing into software 5.7 Demonstrate appropriate tools in software to create an artwork	3 hours Lecture 9 hours Tutorial	Practical Task 4 & Report	W1 – W4
7. 1.0	INTRODUCTION TO PRODUCT DESIGN 1.1 Identify the purpose and function of product design 1.2 Explain the terminology of product design 1.3 Describe the purpose of design in relation to mechanical product 1.4 Identify the job specification of a product designer 1.5 Search the different between industrial design, engineering design and product design. 1.6 Describe the professional ethics applied in product design 1.7 Describe briefly the issues of design 1.8 Search the Design for Environment 1.9 Describe the objective of Design for Environment 1.10 Differentiate Design Stages & Degrees of Freedom 1.11 Explain the End of Life Strategies	8 hours Lecture	Quiz 1	W5-W6
2.0	BASIC DRAWING SKILLS 2.1 Identify the fundamental of sketching and rendering 2.2 Describe the correct materials and tools for sketching and rendering 2.3 Build the basic sketching skills 2.4 Construct the sketching elements	3 hours Lecture 9 hours Tutorial	Practical Task 1	W7 – W9
3.0	TYPES OF SKETCHING 3.1 Build the Thumbnail Sketch 3.2 Build the Concept Sketch 3.3 Build the Detailed Sketch 3.4 Build the Technique in Sketch	3 hours Lecture 9 hours Tutorial	Practical Task 2 & Project	W10 – W12
4.0	BASIC RENDERING 4.1 Identify the color category 4.2 Detect the color tone 4.3 Construct the color planning 4.4 Construct the rendering technique 4.5 Construct finishing rendering 4.6 Build the presentation format 4.7 Build the rendering product	2 hours Lecture 6 hours Tutorial	Practical Task 3 & Presentation	W13 – W14

8.	REFERENCES	<p>Main : Koos Eissen, Steur Roselien (2019). <i>Sketching The Basics</i>. Laurence King Publishing, 2019. (ISBN: 9063695349, 9789063695347)</p> <p>Additional : 1. William F. Powell, Michael Butkus, Walter Foster, Mia Tavonatti (2020). <i>The Art of Basic Drawing</i>. Walter Foster Publishing. (ISBN: 1633228339, 9781633228337)</p>
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Prepared by:



(MUHAMMAD AIMAN BIN ABU JOHAN)

Verified by :



(Tandatangan dan Nama TPA/KJ/KPro/KK)

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Date : 16.8.22

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