UNIVERSITI TEKNOLOGI MARA

IDE516: DESIGN METHODS

Course Name (English)	DESIGN METHODS APPROVED
Course Code	IDE516

MQF Credit	2

Course Description	This course is a semester long course conducted to provide students with analytical and methodological thinking to design. The course is conducted such that students will be able to begin applying the design methods into studio class projects. Assignments are strategically carried out after every major topic in the class to enable students to apply the knowledge that were shared in lectures to identify level of student's understanding in the subject. Final assignments will be conducted to measure the students understanding of design methods leading to design projects the course will also emphasis on current issues and case studies to which students and the instructor will be able to dialogue upon and enhance the course with new and fresh perspective.

Transferable Skills	1. knowledge and understanding of design methods fundamentals to be applied in the design project. 2. Able to analyze suitable design methods and applications in the design projects.

Teaching Methodologies	Lectures, Case Study, Discussion, Project-based Learning

CLO		
	CLO1	Apply knowledge and understanding of design methods fundamentals
	CLO2	Complete proactive analysis of suitable design methods and application
	CLO3	Justify innovative design methods applicable to the real-world problem research project.

Pre-Requisite Courses	No course recommendations

Topics

1. Introduction To Course
1.1) • PROCESS &METHODS: the past and current
1.2) • DESIGN METHODS :definition
1.3) • CATEGORIES OF DESIGN PROCESS : creative design, innovative, redesign & routine

2. Introduction To Design Process
2.1) • DESIGN PROCESS MODELS : the helix , french, the pinball machine , nigel cross, pahl & beitz, pugh, marpless, baxter, cagan & vogel, , ulrich & eppinger product Design (NPD) , hales & gooch, , the double diamond, bs 7000

3. Methods of Exploring Design Situations I
3.1) • Literature Search
3.2) • Trends Matrix
3.3) • From…To Exploration

4. Methods of Exploring Design Situations II
4.1) • Eras Map
4.2) • Competitor –Complementors Map
4.3) • SWOT Analysis

5. Methods of Exploring Design Situations III
5.1) • Survey
5.2) • Ethnographic Interview
5.3) • Field Visit
5.4) • Field Activity

6. Methods of Searching For Ideas I
6.1) • Persona Blueprint
6.2) • User Journey Map
6.3) • ERAF Systems Diagram
6.4) • Interaction Matrix / Net
6.5) • Venn Diagrams

7. Methods of Searching For Ideas II
7.1) • Removing Mental Blocks
7.2) • Principles to Opportunities / Morphological Forced Connections/ Attribute Listing/ Value Hypothesis

8. Methods of Searching For Ideas II
8.1) • Concept sketch
8.2) • Concept Metaphors and Analogies
8.3) • Inspiration Board
8.4) • Mood Board

9. Methods of Problem Sreucture
9.1) • Concept Scenarios/ Storyboard
9.2) • Concept Prototype

10. Report Writing & Portfolio
10.1) Design Communications

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Identify Design Parameter	20%	CLO1
	Assignment	Design Research	20%	CLO2
	Assignment	Application: Inspiration & Form Giving	20%	CLO3
	Individual Project	Project Portfolio	40%	CLO3

Reading List	Recommended Text	• Vijay Kumar 2012, *101 Design Methods*, John Wiley & Sons [ISBN: 9781118330241] • Alex Milton,Paul Rodgers 2013, *Research Methods for Product Design*, Laurence King Publishing [ISBN: 9781780673028]
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	