



UNIVERSITI TEKNOLOGI MARA

CID603: STUDIO CERAMIC R&D PHASE

Course Name (English)	STUDIO CERAMIC R&D PHASE APPROVED
Course Code	CID603
MQF Credit	4
Course Description	<p>This course will be introducing an aspect of students' preparation before diving into the final decision of fabricating the final product in conjunction to the final project. In regards, student will be equipped with the understanding on the important of conducting research and development in product development. Hence, the disciplinary introduction of this course will demonstrate the understanding of multi departmental aspect as preferences that is needed to prepare student to beforehand the planning of design that concern the activity of Design Outcome Identification and Assessment, Design Scenario, Product Research and Development, Product Performances and Assessment. As design-oriented academic field that is interdisciplinary in nature: the variety of disciplines, 'Studio Ceramic Research and Development Phase' provides an extension for the student to benefit this period in focusing an in-depth study to their planning before diving in into their final project product fabrication. 'Studio Ceramic Research and Development Phase' process goes through the same steps in New Product Development in studio approach, however as this is an extension study to project that has not been developed yet by the student before, new risks and uncertainties are collected and studied. Through this introductory approach students able will gain bigger view on the needs of the industry nature while preparing the alignment of their knowledge to the outside world. Exposure to the concept of product development and conducting research on issues will assist students in producing a marketable studio ceramics product. Base on students' knowledge, skills and critical understanding on current issues and challenges in studio ceramics a practicable product design plan will be develop at the end of the course.</p>
Transferable Skills	Research and development.
Teaching Methodologies	Lectures, Studio, Demonstrations, Field Trip, Case Study, Presentation
CLO	<p>CLO1 Initiates component of product development which are align to the industrial specification of product improvement and development in ceramic studio approaches.</p> <p>CLO2 Proposes diverse types of technique and tools on ceramic technical experimental regarding the needs of production for ceramic ware in ceramic studio manners through individual idea of project.</p> <p>CLO3 Report an understanding as a project and technical leader in handling individual and grouping project.</p>
Pre-Requisite Courses	No course recommendations
Topics	<p>1. 1. Introduction to 5 Steps in New Product Development (NPD)</p> <p>1.1) 1.1 Definition 1.2) 1.2 Terminology 1.3) 1.4) 1.2.1 5 Steps in NPD Cycle 1.5) 1.6) 1.2.1.1 Concept 1.7) 1.8) 1.2.1.2 Ideation 1.9) 1.10) 1.2.1.3 Design 1.11)</p>

1.12) 1.2.1.4 Test 1.13) 1.14) 1.2.1. 5 Release
2. 2. Problem Based Learning (PBL) 2.1) Definition 2.2) 2.3) Terminology 2.4) 2.5) 6 Steps in PBL 2.6) 2.7) Identify Outcomes/ Assessments 2.8) 2.9) Design the Scenario 2.10) 2.11) PBL In Accordance to Project 2.12) 2.13) Research and Development (R&D) 2.14) 2.15) Product Performance 2.16) 2.17) Assessment
3. 3. Inspiration and Idea Toward Product 3.1) Problem Solving / Issues 3.2) 3.3) Theme 3.4) 3.5) Subject Matter 3.6) 3.7) Collaborations Project
4. 4. Introduction to Fabrication Process 4.1) Master Piece Production 4.2) 4.3) Aesthetic 4.4) 4.5) Value 4.6) 4.7) Mass – production 4.8) 4.9) Case Study on Large Scale Production 4.10) 4.11) Case Study on Small Scale Production 4.12) 4.13) Troubleshooting in Production
5. 5. Exploratory on Material and Surface Treatment 5.1) Manipulation of Material 5.2) 5.3) Strengthen 5.4) 5.5) Surface Treatment 5.6) 5.7) Decoration Techniques 5.8) 5.9) Glaze Applications
6. 6. Quality Assurance 6.1) Troubleshooting on Surface 6.2) 6.3) Harmful Glaze
7. 7. Etiquette & Standard Operation Procedure (S.O.P) in manufacturing and production. 7.1) 7.1 Etiquette 7.2) 7.3) 7.1.1 Company 7.4) 7.1.2 Employee 7.5) 7.6) 7.2 Standard Operation Procedure (S.O.P) 7.7) 7.8) 7.2.1 Manufacturing 7.9) 7.2.2 Production

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Grouping based assignment related to product improvement in a real manufacturing processes that require student to gain knowledge to emphasize the attribute of 'knowledge' in MQF 5 LOD.	10%	CLO1
	Assignment	Provide proposal through case study of current conventional methodology impact in new product development	10%	CLO2
	Presentation	Group Presentation on the current issues in New Product Development (NPD) towards individual product concept and technical related to 'oral communication' and 'writing communication' in MQF 8 LOD.	30%	CLO3
	Written Report	Grouping based assignment related to product improvement in a real manufacturing processes that require student to gain knowledge to emphasize the attribute of 'knowledge' in MQF 5 LOD.	10%	CLO1
	Written Report	Provide proposal through case study of current conventional methodology impact in new product development	10%	CLO2
	Written Report	Group Presentation on the current issues in New Product Development (NPD) towards individual product concept and technical related to 'oral communication' and 'writing communication' in MQF 8 LOD.	30%	CLO3

Reading List	This Course does not have any book resources
Article/Paper List	This Course does not have any article/paper resources
Other References	<ul style="list-style-type: none"> • BOOK Prince, S. (2017). Craft-art in the Danish countryside: reconciling a lifestyle, livelihood and artistic career through rural tourism.? <i>Journal of Tourism and Cultural Change</i>, 15(4), 339-358 <i>Craft-art in the Danish countryside: reconciling a lifestyle, livelihood and artistic career through rural tourism.?</i> • BOOK Bailey, Paul. (2014). My Space: UK Ceramics Studios [online].? <i>Ceramics Technical</i>, No. 39, Dec: 108-112 <i>My Space: UK Ceramics Studios</i> • BOOK Alex Miller (2017). Creative geographies of ceramic artists: knowledges and experiences of landscape, practices of art and skill. Social & Cultural Geography. Vol. 18, Iss. 2? <i>Creative geographies of ceramic artists: knowledges and experiences of landscape, practices of art and skill.</i> • BOOK Onyon, C. (2012). The Clinical Teacher, 9(1), 22-26. 2012, Problem-based learning: A review of the educational and psychological theory • BOOK Bruce Hanington (2012) Bella Martin Universal Methods of Design: 100 Ways to Research Complex Problems Develop Innovative Ideas, and Design Effective Solutions. Rockport Publishers. 2012, Methods of Design: 100 Ways to Research Complex Problems Develop Innovative Ideas, and Design Effective Solutions • BOOK Vijay Kumar (2012) 101 Design Methods: A Structured Approach for Driving Innovation in Your Organization. John Wiley & Sons 101 Design Methods: A Structured Approach for Driving Innovation in Your Organization • BOOK Marcelo M. Soares, Francisco Rebelo (2017) Ergonomics in Design: Methods and Techniques, CRC Press Ergonomics in Design: Methods and Techniques