



**UNIVERSITI TEKNOLOGI MARA**

**CDT171: CERAMIC MATERIALS AND PROCESS**

<b>Course Name (English)</b>	CERAMIC MATERIALS AND PROCESS <b>APPROVED</b>
<b>Course Code</b>	CDT171
<b>MQF Credit</b>	1
<b>Course Description</b>	This course concentrates on ceramic theory based on history, raw materials, fabrication processes, glazing techniques, firing and quality control. Academic visit enhance the student knowledge and experience of materials, ceramic equipments and processes.
<b>Transferable Skills</b>	Art Teacher Designer Ceramic Artist
<b>Teaching Methodologies</b>	Lectures, Lab Work, Field Trip, Discussion, Presentation
<b>CLO</b>	CLO1 Recognize basic fundamental of ceramic history, functions, properties and raw materials CLO2 Describe ceramic product fabrications and process CLO3 Explain the changes of ceramic material during drying, glazing and firing process
<b>Pre-Requisite Courses</b>	No course recommendations
<b>Topics</b>	
<b>1. 1. Introduction of Ceramic</b> 1.1) 1.1 History 1.2) 1.2 Types of Ceramic 1.3) 1.3 Ceramic product 1.4) 1.4 Ceramic Properties and classification 1.5) 1.5 Function	
<b>2. 2. Ceramic Ware</b> 2.1) 2.1 Type of ceramic ware	
<b>3. 3. Ceramic Forming Methods</b> 3.1) 3.1 Tools and equipment 3.2) 3.2 Type of forming processes	
<b>4. 4. Ceramic Raw Materials</b> 4.1) 4.1 Types of raw materials 4.2) 4.2 Primary and Secondary 4.3) 4.3 Plastic and non-plastic materials	
<b>5. 5. Equipment for clay preparation</b> 5.1) 5.1 Type of ceramic machine	
<b>6. 6. Slip Casting</b> 6.1) 6.1 Model and mould making process 6.2) 6.2 Type of slip casting material	
<b>7. 7. Laboratory procedure</b> 7.1) 7.1 Shrinkage 7.2) 7.2 Porosity 7.3) 7.3 Water absorption	
<b>8. 8. Drying process</b> 8.1) 8.1 Drying procedure 8.2) 8.2 Drying test	

<b>9. 9. Glazing</b> 9.1) 9.1 Glaze function, effect and defect 9.2) 9.2 Type of glaze materials 9.3) 9.3 Glaze application
<b>10. 10. Firing</b> 10.1) 10.1 Type of firings 10.2) 10.2 Type of kilns
<b>11. 11. Quality Control</b> 11.1) 11.1 Procedure of quality control

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	The assignment will tap on the students' research focusing on Ceramic forming, Finishing and Firing method including traditional and Modern	10%	CLO1
	Assignment	lab report and project report	40%	CLO3
	Presentation	The presentation will tap on the students' creativity in presented some topic from the silibus and current issue in Ceramic field. Also their commitment on classes.	10%	CLO3
	Quiz	The quiz will tap on the students' understanding of Ceramic Materials and Processes as a hold	10%	CLO3
	Test	Test: The test will tap on the students' understanding of Ceramicware, Fabrication/forming method, raw materials and Equipment	20%	CLO2
	Written Report	The project will tap on the students' understanding of Ceramic Procedure in Producing product at laboratory room or academic field trip report	10%	CLO1

Reading List	Recommended Text	<ul style="list-style-type: none"> <li>• Duncan Hooson 2012, <i>Workshop Guide to Ceramics</i>, Thames &amp; Hudson [ISBN: 9780500516218]</li> <li>• Andrew Martin, <i>The Essential Guide to Mold Making &amp; Slip Casting</i>, Lark Books [ISBN: 9781600590771]</li> <li>• John W. Conrad 1990, <i>Studio Ceramic Dictionary</i>, Falcon Company [ISBN: 935921095]</li> </ul>
	Reference Book Resources	<ul style="list-style-type: none"> <li>• Anthony Quinn 2007, <i>The ceramics design course</i>, Thames &amp; Hudson London [ISBN: 9780500286890]</li> <li>• Louisa Taylor 2011, <i>Ceramic</i>, W&amp;V Press [ISBN: 9789810892500]</li> </ul>
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	