



UNIVERSITI TEKNOLOGI MARA

CID400: INDUSTRIAL CERAMIC FORMING

Course Name (English)	INDUSTRIAL CERAMIC FORMING APPROVED
Course Code	CID400
MQF Credit	3
Course Description	This course concentrates on basic skills in ceramic modeling and mould making. It explores the various methods of shaping models and mould making by human labor. Students will be guided through various modeling projects with supporting series of lectures and demonstrations to acquire the knowledge and skills in industrial ceramics model and mould making. It will include preparation of raw material use for plaster of paris and mixing procedure. The project will expose student the proper technique to forming ceramic models, the simple implements of mould division that will be produced by single drop and two pieces moulds, the function of spare for mould and finishing. Through this experience, it will guide student to decide the best design form of models and at the same time can decide for the proper division of mould.
Transferable Skills	Basic forming skills for ceramic production
Teaching Methodologies	Lectures, Demonstrations, Discussion, Workshop, Supervision
CLO	CLO1 Initiate the procedure for general plaster work. CLO2 Study the form work to properly shape of the plaster models and the production of plaster moulds manually (by hands). CLO3 Organise finish quality of plaster model include surfaces and production in plaster moulds by using simple implements.
Pre-Requisite Courses	No course recommendations
Topics	
1. 1. Introduction to Model Making for Industrial Ceramics 1.1) 1.1 Terms and Definitions 1.2) 1.2 Studio/Workshop Code of Practice 1.3) 1.3 Health and Safety in Ceramics	
2. 2. Designing 2.1) 2.1 Thumbnail and Exploratory Sketches 2.2) 2.2 Marquette Making: 3-D 'Sketches' 2.3) 2.3 Iterative and General Arrangement Drawings 2.4) 2.4 Technical Drawing 2.5) 2.5 Presentation Drawing	
3. 3. Plaster Work Setup 3.1) 3.1 Work Area and Work Surfaces 3.2) 3.2 Preparing for the Pour 3.3) 3.3 Water to Plaster Ratio 3.4) 3.4 Mixing Routine 3.5) 3.5 Plaster Cast: Patching, Finishing and Drying	
4. 4. Production of Ceramic Models 4.1) 4.1 Materials, tools and process 4.2) 4.1.1 Modelling Clay Form 4.3) 4.1.2 Cubical Plaster Form 4.4) 4.1.3 Cylindrical Plaster Form 4.5) 4.1.4 Conical Plaster Form 4.6) 4.1.5 Pyramidal Plaster Form 4.7) 4.1.6 Spherical Plaster Form	

5. 5. Production of Ceramic Moulds

5.1) 5.1 Materials, tools and process

5.2) 5.1.1 Single drop mould

5.3) 5.1.2 Two pieces mould

6. 6. End Products of Coursework

6.1) 6.1 2-D Design Portfolio Presentation

6.2) 6.2 3-D Practical Work Presentation

6.3) 6.3 Design Report

Assessment Breakdown		%		
Continuous Assessment		100.00%		
Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Individual Project	Individual Project	30%	CLO2
	Portfolio/Log Book	Portfolio	30%	CLO1
	Presentation	Presentation	40%	CLO3
Reading List	Reference Book Resources	<ul style="list-style-type: none"> • Seth Nagelberg 2014, <i>Batch Manufacturing for Ceramics</i>, First Edition Ed., Lulu.com [ISBN: 9781312378599] • Elisabeth Landberger, Mita Lundin 2012, <i>Ceramics</i>, Skyhorse Publishing Inc. [ISBN: 9781581158960] • Duncan Hooson, Anthony Quinn 2017, <i>Ceramics</i>, Firefly Books [ISBN: 9781770859302] • Cindy Fontaine 2017, <i>Ceramics for Beginners!</i>, Createspace Independent Publishing Platform [ISBN: 1548309184] • Karl K. Juelch, Jessica L. Minzner 2013, <i>Secrets of Expert Mold Making and Resin Casting</i>, Createspace Independent Pub [ISBN: 1492294942] 		
Article/Paper List	This Course does not have any article/paper resources			
Other References	This Course does not have any other resources			