UNIVERSITI TEKNOLOGI MARA

CID421: INDUSTRIAL CERAMIC COMPUTER AIDED DESIGN - 3D

Course Name (English)	INDUSTRIAL CERAMIC COMPUTER AIDED DESIGN - 3D APPROVED
Course Code	CID421
MQF Credit	3
Course Description	This course will include the various types of 2 D & 3D modeling software suitable for ceramic industry such as Auto CAD, Solidworks 3 D modeling, Alias, Catia etc. It will demonstrates idea from 2 D drawing to 3 D modeling in model, mould making and product for prototyping.
Transferable Skills	2 D Drawing
Teaching Methodologies	Lectures, Demonstrations, Tutorial, Computer Aided Learning
CLO	CLO1 Identify relevant knowledge and the right practice in in developing 3 D modeling using computer aided design application CLO2 Explain the understanding, attributes and skills in effective ways in the contexts of creative and innovative practices of developing computerized 3D modeling CLO3 Illustrate the ability of producing creative and innovative 3 D model design according to requirement in computer aided design application.
Pre-Requisite Courses	No course recommendations

Topics
1. 1. Introduction to Computer-Aided Ceramic Design 1.1) 1.1. Computer aided design and it's usage 1.2) 1.2. Introduction to Computer-Aided 2.D software 1.3) 1.3. Familiar with various components of the Graphical user interface (GUI)
2. 2. Computer-Aided 2 D Hand on Projects 1 2.1) 2.1. Line & Circle 2.2) 2.2. Polygon & Line 2.3) 2.3. Title block & Logo 2.4) 2.4. Quiz 1
3. 3. Computer-Aided 2 D Hand on Projects 2 3.1) 3.1. Friction plate 3.2) 3.2. Geneva cam 3.3) 3.3. Metal handle 3.4) 3.4. Quiz 2
4. 4. Introduction to Computer-Aided 3D Modelling Software 4.1) 4.1. Familiar with various components of the Graphical user interface (GUI) 4.2) 4.2. Basic 3 D Part Modelling 4.3) 4.3. Basic 3 D Assembly 4.4) 4.4. Basic 3 D Drawing 4.5) 4.5. Project assignment 1 (Part, Assembly & Technical Drawing)
5. 5. Revolve & Extrude Features 5.1) 5.1. Project assignment 2 (Mug 1, 2 & 3)
6. 6. Revolve & Sweep Features 6.1) 6.1. Project assignment 3 (Bottle, Candle Stand)
7. 7. Loft Features 7.1) 7.1. Project assignment 4 (Vase, Chisel & Microphone)
8. 8. Test 1 8.1) Autocad

9. 9. Pattern & Mirror Features 9.1) 9.1. Project assignment 5 (Gear, Vase & Spice Jar)
10. 10. Tableware Projects 10.1) 10.1. Project assignment 6 (Coffee Pot Body, Spout & handle) 10.2) 10.2. Project assignment 6b (Coffee Pot Lid, Cup & Saucer)
11. 11. Assemblies 11.1) 11.1. Project assignment 6c (Coffee Set Assemblies)
12. 12. Special Topics 12.1) 12.1. Photoworks 12.2) 12.2. Mould Design
13. 13. Personal / Individual / Group Projects 13.1) N/A
14. 14. Test 2 14.1) Solidwork

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment

Assessment Type	Assessment Description	% of Total Mark	CLO
Assignment	Project assignments require student to gain knowledge to the current CAID software.	60%	CLO1
Final Test	Produce design from 2 D drawing of ceramic tableware to 3D modeling using CAID software related to 'Problem solving and scientific skill'	20%	CLO3
Test	To ensure the student using the right commands and toolbars features in producing 3D modeling design related to 'Social skills, Teamwork and Responsibilities '	20%	CLO2

Reading List

Reference Book Resources

- **James Leach 2016,** ***AutoCAD 2017 Instructor Perfect Paperback***
- **Randy Shih 2016,** ***AutoCAD 2017 Tutorial First Level 2D Fundamentals Perfect Paperback***
- **CADFolks 2016,** ***AutoCAD 2017 For Beginners Paperback***
- **2016,** ***AutoCAD 2017: Beginning and Intermediate Paperback***
- **Scott Onstott 2017,** ***AutoCAD 2017 and AutoCAD LT 2017: Essentials 1st Edition***
- **Cheryl R. Shrock, Steve Heather 2017,** ***Beginning AutoCAD 2017: Exercise Workbook Workbook Edition***
- **Terence M. Shumaker, David A. Madsen, David P. Madsen 2017,** ***AutoCAD and Its Applications Basics 2017 24th Edition***
- **CADArtifex 2016,** ***AutoCAD 2017: A Power Guide for Beginners and Intermediate Users Paperback***
- **Mark Dix, Paul Riley 2017,** ***Discovering AutoCAD 2017 1st Edition***
- **George Omura , Brian C. Benton 2017,** ***Mastering AutoCAD 2017 and AutoCAD LT 2017 1st Edition***
- **Gaurav Verma, Matt Weber 2016,** ***SolidWorks 2017 Black Book Paperback***
- **Gaurav Verma, Matt Weber 2016,** ***SOLIDWORKS 2017 Basic Tools Perfect Paperback***
- **Paul Tran,** ***13. SOLIDWORKS 2017 Advanced Techniques Perfect Paperbake***

Article/Paper List: This Course does not have any article/paper resources

Other References: This Course does not have any other resources