Lesson Plan

Name of Faculty : **M.M.Eqbal**
Discipline : CERAMIC ENGINEERING
Semester : 2nd Semester
Subject : CERAMIC FABRICATION
Lesson Plan Duration: 16 WEEKS
Work Load (Lecture/Practical) per week in hours: Lecture 4 hours Practical 4 hours

Week	Theory		Practical	
	Day	**Topic (Including assignment/test)**	**Day**	**Topic**
1st	1	Unit-1 Introduction to ceramic fabrication	1	Identification of ceramic raw material and additives
	2	1.1 Definition of fabrication		
	3	1.2 Classification of ceramic Fabrication process with example	1	Identification of ceramic raw material and additives
	4	2 Basic Raw Material & additives		
2nd	5	2.1Clay-its role & Classification	2	Demonstration of Machinery used in the shaping & identification of tools according to use
	6	2.2Properties and uses of clay		
	7	2.3Quartz- its role, properties	2	Demonstration of Machinery used in the shaping & identification of tools according to use
	8	2.3Quartz–its uses		
3rd	9	Feldspar-its role, properties	3	Prepares terracotta wall plates
	10	Feldspar-its uses		
	11	Additives its types, Additives its role	3	Prepares terracotta wall plates
	12	Water, Plasticizer, Binder, Deflocculates		
4th	13	Lubricants	4	Prepare terracotta Jewelry articles
	14	Unit-23.1 Batch Preparation 3.1 Definition of batch preparation		
	15	Typical Whiteware body composition	4	Prepare terracotta Jewelry articles
	16	Drymix, Plastic, Slip mix (flow diagram of body preparation)		
5th	17	Sesioinal -1	5	Clay models having attachments/projections
	18	Sesioinal -1		
	19	Sesioinal -1	5	Clay models having attachments/projections
	20	Sesioinal -1		

6th	21	Demonstrate methods of body preparation by dry	6	Preparing a Bowl
	22	Demonstrate methods of body preparation by wet method		
	23	Enumerate the advantages and disadvantages of dry method	6	Preparing a Bowl
	24	Enumerate the advantages and disadvantages of wet method		
7th	25	Explain Weathering	7	Shaping flower vase
	26	Explain Ageing		
	27	Blunger	7	Shaping flower vase
	28	Pugging/Explanation of pugmill (ordinary)		
8th	29	Pugging/Explanation of pugmill (de-airing)	8	Fabricating pot
	30	Unit-4 Shaping Illustrate the different shaping process with sketches		
	31	Illustrate constructional features of machinery for 4.1 Plastic Shaping - Hand moulding with potter's wheel	8	Fabricating pot
	32	Plastic Shaping – Jiggering & Jollying		
9th	33	Semi-plastic Shaping-pressing, Extrusion, Turning	9	Prepare a Triaxial batch composition for plastic pressing and fabricate an article.
	34	Dry Pressing study the Particle packing characteristics		
	35	Outline the important parameters of pressing (powder , die), Outline the important parameters of pressing (pressure characteristics)	9	Prepare a Triaxial batch composition for plastic pressing and fabricate an article.
	36	Stages of pressing		
10th	37	Sesioinal -1I	10	Prepare aTriaxial batch composition for semi - plastic pressing and Fabricate an article.
	38	Sesioinal -1I		
	39	Sesioinal -1I	10	Prepare a Triaxial batch composition for semi -plastic pressing and Fabricate an article.
	40	Sesioinal -1I		
11th	41	Types of presses: Toggle press, Fly press / screw press	11	Prepare single piece POP mould

	42	Friction press, Hydraulic press		
	43	Pneumatic Press	11	Prepare single piece POP mould
	44	Casting Slip, Slip casting (solid, hollow)		
12th	45	Explain Surface finishing methods - Trimming , Smoothening	12	Prepare double triple piece POP mould
	46	Unit-5 Drying & Firing 5.1 Definition and importance of drying in ceramics		
	47	Definition and importance of drying in mechanism	12	Prepare double triple piece POP mould
	48	Classification of driers -batch & continuous , for materials and products with examples		
13th	49	General sketch of drier and its working	13	Prepare slip and leave for ageing
	50	Common drying defects with remedies. (warping, cracking, lamination)		
	51	Definition of firing, types of firing - biscuit, Types of furnaces, Stages in firing ,Genera sketch of furnace with working	13	Prepares lip and leave for ageing
	52	UNIT- 6. Process Flow Charts Illustrate and explain general manufacturing by dry process of ceramic products with flow chart.		
14th	53	Process Flow Charts Illustrate and explain general manufacturing by wet process of ceramic products with flow chart.	14	Preparation of article by slip casting
	54	Describe the Bone china plates manufacturing by jiggering & Jollying with flow diagram		
	55	Describe the Bone china cup manufacturing by jiggering & Jollying with flow diagram	14	Preparation of article by slip casting
	56	Sesioinal -1II		
15th	57	Describe the Ceramic cups manufacturing by Jollying with flow diagram	15	Preparation of glaze
	58	Refractories	15	Application of glaze
	59	Refractories manufacturing by semi-dry pressing,	16	Drying of slip casted wares
	60	Floor tiles manufacturing by dry pressing	16	Firing of wares