CERAMICS

**COURSE TITLE: INTRODUCTION TO CERAMICS COURSE CODE: IFA 1114 Course Description**

A study of the history, principles and practices of cultural and world ceramics as an art/crafts. Introduction to materials, techniques, methods and principles of hand building techniques and methods in ceramics as related to basic design in 2D or 3D drawing. Experiences in processes of forming decorating, glazing and firing pottery.

**Course Objectives / Aims**

- To introduce to understanding of generic processes of ceramic hand making method across a breadth of materials and appropriate methods of production.
- To begin to introduce within student a clear understanding of fundamental process of design in ceramics as course of study.
- To introduce the discipline of enquiry and the ability to appraise personal values to give students an individual and sound basis in ceramic product.
- To establish visual and contextual awareness and appreciation of issues pertinent to the ceramic practice and cultural industries generally.

To develop interests in ceramics based on the choice for their themes for exploration. Most of the tasks to be executed by the students will be project oriented specifically intended to provide students with:

- Ceramic concepts based on problem solving and studio/industrial investigation
- Experience on use of studio resources (equipment, material and firing)
- Experience on project planning, management, coordination and execution.
- Further experience in ceramic mass production and individual aesthetic ceramic works.

**Detailed Course Outline**

**Week 1: Ceramics as a course of study**

- Definition of the term of study
- Scope of the development of the ceramic industry
- Different areas of ceramic industry
- Studio ceramics versus industrial
- Historical review of ceramic practices and its trends through ages
- Commercialization of ceramic practice
- Some concepts about ceramics

- Ceramics as an art and design

**Week 2: Introduction to ceramic materials**

- Origin of clay
- Feldspar and how to identify
- Kaolin (primary clay) and its characteristics
- Ball clay (secondary clay) and its characteristics
- Fire clays and other types of clay
- Experiments for testing clay: plastic limit, liquid limit, plasticity, shrinkage, softening point moisture content and dry content.

**Week 3: Characteristics of Clays**

- Nature of clay
- Simple chemistry of clay
- Chemical changes in clay crystals
- Physical nature of clays
- Drying and particle orientation
- Different types of ball clays
- Identification of clay to be used in ceramic production **Week 4: Preparation of plastic clay**
- Definition of plastic clay
- Dry process and wet process
- Formulation of clay bodies
- Raw materials for clay bodies
- Filler for clay bodies e.g. frog
- Classification of ceramic bodies
- Earthenware, stoneware and porcelain
- China ware and oven proof ware

**Week 5: Preparation of plastic clay continued**

- Requirement for clay preparation in studio setting
- Requirement for clay preparation the industrial setting

- Step by step of plastic clay preparation: soaking clay, mixing clay and sieving clay
- Dry methods on plaster moulds
- Slip method and industrial slip house
- Kneading and wedging to workable state
- Storing clay to maintain its workable state
- Recycling clay to restore its workable state

**Week 6: Introduction to Hand forming methods and techniques**

- Pinching Hand forming methods
- Possible forms by pinching techniques
- Exploration of creative and innovative forms using pinching methods
- Introducing decoration on pinched pots **Week 7: Coiling methods**
- Step by step of coil hand forming methods
- Coiled shapes
- Exploring coil method as a technique for decoration
- Advantages and disadvantages for coiling method
- Creative and innovative methods in coiling techniques

**Week 8: Student's project in coil method**

- Design process for coiled forms
- Drawing from sources of inspiration
- Design and making large ceramic forms
- Pieces with exposed coils over its surfaces as decoration.

**Week 9: Slab making methods**

- Step by step of slab method
- Slab shapes
- Exploring possible shapes in slab-making techniques
- Creative and innovative slab-making methods

**Week 10: Student's Project in slab building method**

- Drawing for slab-making techniques
- Exploration of varying surface textures in slab forms
- Fractional and decorative slab forms in ceramics.

**Week 11: Combination of hand forming methods**

- Designing and making forms from a combination of all hand forming methods
- Execution of creative forms from nature and man made objects
- Execution of large forms from combined methods

**Week 12: Introduction of Decorative Techniques in Ceramics Production**

- Decorative techniques at plastic state
- Decorative techniques at leather hard state
- Decorative techniques at bone dry and fired state
- Impressed relief, sprigging, modeled relief, marbling, slip decoration, burnishing and slip painting
- Designing and applying design motifs on ceramic forms.

**Week 13: Introduction to machine production in the studio setting**

- Introduction potter's wheel throwing method
- Preparation of throwing clay
- Step by step throwing method
- Centering process
- Throwing simple ceramic forms

**Week 14: Potter's wheel throwing method continued**

- Exploring throwing method
- Exploring different shapes
- Making creative forms by altering thrown shapes
- Introducing decoration thrown forms

**Week 5: Firing Ceramic forms at varying temperature**

- Process of firing ceramic forms
- Kiln types

- Different firing energies
- Preparation of ceramic form for firing
- Drying ceramic form up to the firing stage
- Using pyrometric cones to detect kiln temperature
- Kiln care and maintenance
- Kiln loading and packing
- Unloading the fired kiln

**Week 16 & 17**

University Examination **Learning Outcomes**

- By the end of the course students will have developed an increased knowledge and adeptness of ceramic material with clear view of their potentials and limitation.
- The student will have an understanding of the issues involved in design and increased awareness of the problem solving.
- The students will be able independently execute simple design process from concept stage to final product.
- The student will have capacity to be sensitive and appreciative of ceramic materials and techniques.
- The students will have ability to develop ideas directed towards specific materials and studio forming methods and techniques.

**Method of Teaching/delivery**

- Studio Demonstration, instruction and technical inputs
- Lecture notes
- Practical studio work and experimented
- Group discussion/presentation/critique
- Self directed studio assignment/project and course work
- Visual research and image collection

**Mode of Assessment**

Course work 40%

- Planning and Developmental studies/sketches 10%

- Execution of the practical work (Reasonable body of work) 20%
- Tests in theory based on ceramic technology 10%

End of semester Examination: 60%

- Theory examination: 20%
- Practical examination: 40% Final total work: 100%

**Reading/Reference Materials**


1. Bryan Sentence; Ceramics a world guide to traditional techniques, Themes and Hudson, 2004.
2. David Cowley; Moulded and Slip Cast Pottery and Ceramics B.T Batsford Ltd London, 1992.
3. Dolors Ros; Ceramics, Decorative Techniques, Barron's, 2002.
4. Glenn C. Nelson; Ceramics: a potter's handbook 4th Edition Holt, Rinehart and Winston, 1971.
5. Harry Frase; Ceramic faults and their remedies, A & C Black, London, 1998.
6. John Colbeck; Pottery techniques of decoration, B.T Batsford Ltd, 1991.
7. John Colbeck; Pottery, the technique of throwing, B.T. Batsford Ltd, London, 1991.
8. John Gale; Teach yourself Pottery Hadder and Stoughton Ltd, 2001.