**Department of Industrial Chemistry**                                             **Faculty of Science**

**IC (209)211          Introduction to Ceramics**                                     **4(3/3-1/3)**

**Abbreviation          -**

**Prerequisite          None**

**This course is opened for**     MAJOR COMPULSORY COURSE

**Course Description**

Introduction, raw materials, forming, glazes and glazing, drying and dryer, firing and kilns and new ceramics.

**Objectives**

1.  Students will be able to understand basic principles of traditional ceramics and manufacture.

2.  Students will be experienced with simple experiments in ceramic processing.

| Course Content | Lecture Hours |
|---|:---:|
| 1. Introduction | 4 |
| 2. Raw materials | 10 |
| 2.1 Type of raw materials | |
| 2.2 Body compositions of earthenware, stoneware, porcelain and bone china | |
| 2.3 Body preparation | |
| 3. Forming | 8 |
| 4. Glazes and glazing | 10 |
| 4.1 Glaze compositions | |
| 4.2 Glaze preparation and glazing | |
| 4.3 Glaze defects | |
| 5. Drying and dryer | 3 |
| 6. Firing and kilns | 8 |
| 6.1 Firing techniques | |
| 6.2 Ceramics kilns | |
| 7. New ceramics | 2 |
| Total | 45 |

| Laboratory Topics | Laboratory hours |
|---|:---:|
| 1. Introduction to ceramics laboratory | 3 |
| 2. Raw materials | 9 |
| 3. Forming | 9 |
| 4. Glazes and Glazing | 9 |
| 5. Drying and dryer | 6 |
| 6. Firing and kilns | 9 |
| Total | 45 |