# Course Specifications

Programme(s) on which the course is given: Post-Graduate (Mineralogy and Petrology)
Major or Minor element of programmes: Major
Department offering the programme: Geology
Department offering the course: Geology
Academic year / Level: --------/Post Graduate
Date of specification approval:

## a- Basic Information

**Title:** Ceramic Manufacturing Technology **Code:** G655

**Credit Hours:** 2 Credit Hours **Lecture:** 2 Credits

**Tutorial:** **Practical:** ------ **Total:** 28 Credit Hours

## b- Professional Information

**1 – Overall Aims of Course**

- Understanding of the complete ceramic manufacturing process.

**2 – Intended Learning Outcomes of Course (ILOs)**

**c- Knowledge and Understanding:** By the end of this course, the student should be able to:

**a1**- Understand the process of ceramic manufacturing.
**a2-** Understand terminology, nomenclature and classification used in ceramic technology.
**a3-** Identify factors that affect material selection.

**d- Intellectual Skills:** By the end of this course, the student should be able to:

**b1-** Create, apply and disseminate knowledge within the field of ceramic manufacturing.
**b2-** Differentiate between the different types of ceramic.

**e- Professional and Practical Skills:** By the end of this course, the student should be able to:

**c1-** Apply and adopt the course topics into professional application.
**c2-** Explain the technological systems approach and how it relates to manufacturing: inputs (materials, labour, capital), processes (material processing), and outputs (for industry or the consumer market).

**f- General and Transferable Skills:** By the end of this course, the student should be able to:

**d1-** Critically use the internet as a means of communication and as a source of information.
**d2-** Communicate effectively to a variety of audiences in written, verbal and graphical forms.

**3. Contents**

| Topic | Credit hours | Lecture |
|---|---|---|
| Introduction to ceramic products | 4 | 2 |
| Raw materials for ceramic manufacture | 4 | 2 |
| Ceramic classification | 4 | 2 |
| Ceramic shaping | 4 | 2 |
| Ceramic drying | 4 | 2 |

| | | |
|---|---|---|
| Ceramic firing conditions | 4 | 2 |
| Ceramic properties and measurements | 4 | 2 |
| **Total** | **28** | **14** |

**4 – Teaching and Learning Methods**

**4.1-** Professorial lectures
**4.2-** Class discussions
**4.3-** Preparation of scientific reports during the semester.

**5- Student Assessment Methods**

| | |
|---|---|
| **5.1-** Regular written exam. | to assess a1-a3 |
| **5.2-** Mid-term exam. | to assess b1-b2 |
| **5.3-** At the end of term exam. | to assess c1-c2 |
| **5.**4- Reports and discussions. | to assess d1-d2 |

**Assessment Schedule**

| | |
|---|---|
| Assessment 1: Short exam (class activities) | every two weeks |
| Assessment 2: Mid-term (written) | week 7 |
| Assessment 3: Final-term (written and verbal) | week 15-16 |

**Weighting of Assessments**

| | |
|---|---|
| Semester work : | 20% |
| Mid-Term Examination: | 20% |
| Final-term Examination: | 60% |
| Total: | 100% |

**6- List of References**

**6.1.-** Ceramics: Industrial Processing and Testing, John T. Jones & M. F. Berard, Iowa State University Press, First Edition 1972, Second Edition 1993
**6.2.-** Ceramic Glazes, Cullen W. Parmalee & Cameron G. Harmon, Cahners Publishing Company, Inc, Boston, Third Edition 1973
**6.3-** All the topics of the course will be collected from published international journals.
**6.4-** Ceramics international (WWW. Elsevier.com/locate/ceramint)

**7- Facilities Required for Teaching and Learning**

Laptop, data show, internet, international journals.

**Course Coordinator:** Prof. Ibrahim khalaf, **Other Staff:** Prof.

**Head of Department:** Orabi Hussein Orabi

**Date: / /2012**