240613 - Technological and Scientific Development in Antiquity. Egypt and Middle East

Coordinating unit: 240 - ETSEIB - Barcelona School of Industrial Engineering
Teaching unit: 713 - EQ - Department of Chemical Engineering
Academic year: 2017
Degree: BACHELOR'S DEGREE IN INDUSTRIAL TECHNOLOGY ENGINEERING (Syllabus 2010). (Teaching unit Optional)
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2010). (Teaching unit Optional)
BACHELOR'S DEGREE IN MATERIALS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
ECTS credits: 3

Teaching staff
Coordinator: FRANCISCO JAVIER GIMENEZ IZQUIERDO
Others: FRANCISCO JAVIER GIMENEZ IZQUIERDO

Teaching methodology
The teacher will develop theoretical explanations as well as practical examples. In addition, the teacher will guide different works for homework. Active learning as well as Cooperative learning will be extensively used.

Learning objectives of the subject
At the end of the course, the student should be able to:
- Describe the evolution of the ancient mediterranean civilizations at the Bronze Age
- Identify funerary monuments depending on the place and the time
- Identify the materials used in the antiquity in pigments, glass objects and jewels.
- Describe the commercial routes in the ancient Mediterranean
- Identify the metals used in the Bronze Age and their application

Study load

<table>
<thead>
<tr>
<th>Total learning time: 75h</th>
<th>Hours large group: 0h</th>
<th>0.00%</th>
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<tbody>
<tr>
<td></td>
<td>Hours medium group: 30h</td>
<td>40.00%</td>
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<td>Hours small group: 0h</td>
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<td>Guided activities: 0h</td>
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<tr>
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<td>Self study: 45h</td>
<td>60.00%</td>
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## Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Learning time:</th>
<th>Description:</th>
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</table>
| **1) INTRODUCTION** | 5h | Theory classes: 2h  
Self study : 3h  |
| **2) ANCIENT EGYPTIAN CIVILIZATION** | 15h | Theory classes: 6h  
Self study : 9h  |
| **3) TECHNOLOGY OF THE FUNERARY PRACTICES: pyramids, tombs and mummies** | 12h 30m | Theory classes: 5h  
Self study : 7h 30m  |

### 1) INTRODUCTION

- 1.1 Myth, science and technology: the mythical discourse
- 1.2 The Mediterranean Neolithization and the Myth of Osiris
- 1.3 The Urban Revolution in Mesopotamia
- 1.4 The start of pharaonic Egypt

### 2) ANCIENT EGYPTIAN CIVILIZATION

- 2.1 The egyptology: from Cleopatra VII until today
- 2.2 Ancient Egyptian writing
- 2.3 History of the Ancient Egypt

### 3) TECHNOLOGY OF THE FUNERARY PRACTICES: pyramids, tombs and mummies

- 3.1 Building and function of Egyptian pyramids. The Great Pyramid at Giza
- 3.2 The Valley of the Kings (VoK)
- 3.3 Mummification
  - The reasons
  - The process
  - Paleopathology
  - New Kingdom Royal Mummies
### 4) ANCIENT DECORATIVE ARTS

- **Description:**
  - 4.1 Ancient pigments and colors
  - 4.2 The ‘Egyptian Blue’
  - 4.3 The industry of glass in Egypt and Mesopotamia

- **Learning time:** 12h 30m
  - Theory classes: 5h
  - Self study: 7h 30m

### 5) TRADE ROUTES AND PRODUCTS

- **Description:**
  - 5.1 Oriental Mediterranean trade route: glass, Egyptian blue and copper
  - 5.2 Orient trade route: lapislázuli and tin
  - 5.3 The African trade route: obsidian

- **Learning time:** 12h 30m
  - Theory classes: 5h
  - Self study: 7h 30m

### 6) METALLURGY IN THE ANCIENT MEDITERRANEAN WORLD

- **Description:**
  - 6.1 Copper and arsenical copper
  - 6.2 Bronze and the "Mistery of Tin"
  - 6.3 Provenance analysis

- **Learning time:** 12h 30m
  - Theory classes: 5h
  - Self study: 7h 30m

### 7) TROY AND THE END OF THE BRONZE AGE

- **Description:**
  - 7.1 Trojan War
  - 7.2 The Sea Peoples
  - 7.3 The end of the Bronze Age

- **Learning time:** 5h
  - Theory classes: 2h
  - Self study: 3h
240613 - Technological and Scientific Development in Antiquity. Egypt and Middle East

**Regulations for carrying out activities**

Written exams with books.

**Bibliography**

**Basic:**


**Others resources:**