295900 - TCAEM - Technology and Sciences in Ancient Times: Egypt and Mesopotamia

Coordinating unit: 295 - EEBE - Barcelona East School of Engineering
Teaching unit: 713 - EQ - Department of Chemical Engineering
Academic year: 2019
Degree: BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN MATERIALS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
ECTS credits: 6
Teaching languages: Spanish

Teaching staff
Coordinator: FRANCISCO JAVIER GIMENEZ IZQUIERDO
Others: Primer quadrimestre:
FRANCISCO JAVIER GIMENEZ IZQUIERDO - T10

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: 150h</th>
<th>Hours large group: 60h</th>
<th>40.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours medium group: 0h</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Hours small group: 0h</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Self study: 90h</td>
<td>60.00%</td>
<td></td>
</tr>
</tbody>
</table>
# 295900 - TCAEM - Technology and Sciences in Ancient Times: Egypt and Mesopotamia

## Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Learning time: 15h</th>
<th>Description:</th>
</tr>
</thead>
</table>
| **1) INTRODUCTION** | | 1. Myth, science and technology: the mythical discourse and the logical discourse  
2. The Mediterranean Neolithization  
3. The Urban Revolution in Mesopotamia  
4. The Bronze Age |

<table>
<thead>
<tr>
<th>Section</th>
<th>Learning time: 25h</th>
<th>Description:</th>
</tr>
</thead>
</table>
| **2) ANCIENT EGYPTIAN CIVILIZATION** | | 1. Egyptology: from Cleopatra VII until XXI century  
2. Geography and Symbology  
3. Ancient Egyptian writing  
4. History of the Ancient Egypt |

<table>
<thead>
<tr>
<th>Section</th>
<th>Learning time: 25h</th>
<th>Description:</th>
</tr>
</thead>
</table>
| **3) TECHNOLOGY OF THE FUNERARY PRACTICES** | | 1. The Great Pyramid at Giza  
2. The Valley of the Kings (VoK)  
3. Mummification and paleopathology |

<table>
<thead>
<tr>
<th>Section</th>
<th>Learning time: 25h</th>
<th>Description:</th>
</tr>
</thead>
</table>
| **4) ANCIENT DECORATIVE ARTS** | | 1. The industry of Ancient pigments and colors  
2. The 'Egyptian Blue'  
3. Glass |
### 5) ANCIENT MEDITERRANEAN METALLURGY

**Description:**
- 5.1 Copper
- 5.2 Arsenical copper
- 5.3 Bronze
- 5.4 Lead Isotope Analysis (LIA)

**Learning time:** 25h
- Theory classes: 10h
- Self study: 15h

### 6) TRADE ROUTES AND PRODUCTS EXCHANGE

**Description:**
- 6.1 Oriental Mediterranean trade route: glass, Egyptian blue and copper
- 6.2 Oriental trade route: lapis and tin
- 6.3 African trade route: obsidian

**Learning time:** 25h
- Theory classes: 10h
- Self study: 15h

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

**Description:**
- 7.1 The Sea Peoples
- 7.2 The Trojan War
- 7.3 The start of the Iron Age

**Learning time:** 10h
- Theory classes: 4h
- Self study: 6h

---

**Regulations for carrying out activities**

Written exams with books.
Bibliography

Basic:


Others resources:

Booklet in ATENEA
Articles from scientific journals
Books chapters
Photographies