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

Coordinating unit: 295 - EEBE - Barcelona East School of Engineering
Teaching unit: 713 - E0 - Department of Chemical Engineering
Academic year: 2017
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: 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: 150h</th>
<th>Hours large group: 60h</th>
<th>40.00%</th>
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</thead>
<tbody>
<tr>
<td>Hours medium group: 0h</td>
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<tr>
<td>Hours small group: 0h</td>
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<tr>
<td>Guided activities: 0h</td>
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<tr>
<td>Self study: 90h</td>
<td>60.00%</td>
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## 1) INTRODUCTION

**Learning time:** 15h  
Theory classes: 6h  
Self study : 9h

**Description:**  
1.1 Myth, science and technology: the mythical discourse and the logical discourse  
1.2 The Mediterranean Neolithization  
1.3 The Urban Revolution in Mesopotamia  
1.4 The Bronze Age

## 2) ANCIENT EGYPTIAN CIVILIZATION

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

**Description:**  
2.1 Egyptology: from Cleopatra VII until XXI century  
2.2 Geography and Symbology  
2.3 Ancient Egyptian writing  
2.4 History of the Ancient Egypt

## 3) TECHNOLOGY OF THE FUNERARY PRACTICES

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

**Description:**  
3.1 The Great Pyramid at Giza  
3.2 The Valley of the Kings (VoK)  
3.3 Mummification and paleopathology

## 4) ANCIENT DECORATIVE ARTS

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

**Description:**  
4.1 The industry of Ancient pigments and colors  
4.2 The 'Egyptian Blue'  
4.3 Glass
# 5) ANCIENT MEDITERRANEAN METALLURGY

<table>
<thead>
<tr>
<th>Description</th>
<th>Learning time: 25h</th>
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<tbody>
<tr>
<td>5.1 Copper</td>
<td>Theory classes: 10h</td>
</tr>
<tr>
<td>5.2 Arsenical copper</td>
<td>Self study : 15h</td>
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<tr>
<td>5.3 Bronze</td>
<td></td>
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<td>5.4 Lead Isotope Analysis (LIA)</td>
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# 6) TRADE ROUTES AND PRODUCTS EXCHANGE

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<thead>
<tr>
<th>Description</th>
<th>Learning time: 25h</th>
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</thead>
<tbody>
<tr>
<td>6.1 Oriental Mediterranean trade route: glass, Egyptian blue and copper</td>
<td>Theory classes: 10h</td>
</tr>
<tr>
<td>6.2 Oriental trade route: lapis and tin</td>
<td>Self study : 15h</td>
</tr>
<tr>
<td>6.3 African trade route: obsidian</td>
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</tbody>
</table>

# 7) TROY AND THE END OF THE BRONZE AGE

<table>
<thead>
<tr>
<th>Description</th>
<th>Learning time: 10h</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 The Sea Peoples</td>
<td>Theory classes: 4h</td>
</tr>
<tr>
<td>7.2 The Trojan War</td>
<td>Self study : 6h</td>
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<tr>
<td>7.3 The start of the Iron Age</td>
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## Regulations for carrying out activities

Written exams with books.
Bibliography

Basic:


Others resources:

- Booklet in ATENEA
- Articles from scientific journals
- Books chapters
- Photographies