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

Unit in charge: Barcelona East School of Engineering
Teaching unit: 713 - EQ - Department of Chemical Engineering.
Degree: BACHELOR’S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR’S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR’S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR’S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR’S DEGREE IN MATERIALS ENGINEERING (Syllabus 2010). (Optional subject).

Academic year: 2023  ECTS Credits: 6.0  Languages: Spanish

LECTURER
Coordinating lecturer: 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>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours large group</td>
<td>60,0</td>
<td>40.00</td>
</tr>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
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</tbody>
</table>

Total learning time: 150 h
## CONTENTS

### 1) INTRODUCTION

**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

**Full-or-part-time:** 15h  
Theory classes: 6h  
Self study : 9h

### 2) ANCIENT EGYPTIAN CIVILIZATION

**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

**Full-or-part-time:** 25h  
Theory classes: 10h  
Self study : 15h

### 3) TECHNOLOGY OF THE FUNERARY PRACTICES

**Description:**
3.1 Egyptian pyramids. The Great Pyramid at Giza  
3.2 Egyptian tombs. The Valley of the Kings (KV)  
3.3 Mummification and paleopathology

**Full-or-part-time:** 25h  
Theory classes: 10h  
Self study : 15h

### 4) ANCIENT DECORATIVE ARTS

**Description:**
4.1 The industry of Ancient pigments and colors  
4.2 The 'Egyptian Blue'  
4.3 Glass

**Full-or-part-time:** 25h  
Theory classes: 10h  
Self study : 15h
5) ANCIENT MEDITERRANEAN METALLURGY

Description:
5.1 Copper
5.2 Arsenical copper
5.3 Bronze
5.4 Tin “mistery”

Full-or-part-time: 25h
Theory classes: 10h
Self study : 15h

6) GEMS STONES

Description:
6.1 Lapis
6.2 Obsidian
6.3 Turquoise
6.4 Other gem stones

Full-or-part-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

Full-or-part-time: 10h
Theory classes: 4h
Self study : 6h

GRADING SYSTEM

EXAMINATION RULES.
Written exams with books.

BIBLIOGRAPHY

Basic:

RESOURCES
Other resources:
Booklet in ATENEA
Articles from scientific journals
Books chapters
Photographies