# COURSE OUTLINE

(1) GENERAL

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>ENGINEERING SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPARTMENT</td>
<td>CIVIL ENGINEERING DEPARTMENT</td>
</tr>
<tr>
<td>LEVEL OF STUDIES</td>
<td>UNDER GRADUATE</td>
</tr>
<tr>
<td>COURSE CODE</td>
<td>2305518</td>
</tr>
<tr>
<td>SEMESTER</td>
<td>5th</td>
</tr>
</tbody>
</table>

| COURSE TITLE                | Construction machinery |

## INDEPENDENT TEACHING ACTIVITIES

If credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits.

<table>
<thead>
<tr>
<th>WEEKLY TEACHING HOURS</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).

## COURSE TYPE

Specialized Knowledge, skills development

## PREREQUISITE COURSES:

- 

## LANGUAGE OF INSTRUCTION and EXAMINATIONS:

Greek (official)- English (optional)

## IS THE COURSE OFFERED TO ERASMUS STUDENTS:

- 

## COURSE WEBSITE (URL)

Learning outcomes
The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A
- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

Basic and essential knowledge:
- to understand the needs of a project for correct choice of earthmoving machines on a project,
- for costing study and time definition of excavation, paving, embankment and machinery depreciation during their useful life
- to develop atomic engineering responsibility and scientific opinion

General Competences
Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?
- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Adapting to new situations
- Decision-making
- Working independently
- Team work
- Working in an international environment
- Working in an interdisciplinary environment
- Production of new research ideas

Others...

Course content

Structural Cranes, Hoists

(2) LEARNING OUTCOMES

(3) Course content

(4) TEACHING and LEARNING METHODS - EVALUATION
DELIVERY
Face-to-face, Distance learning, etc.

USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
Use of ICT in teaching, laboratory education, communication with students

TEACHING METHODS
The manner and methods of teaching are described in detail.
Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.

The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Semester workload</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>26</td>
</tr>
<tr>
<td>Personal study</td>
<td>49</td>
</tr>
<tr>
<td>Course total</td>
<td>75</td>
</tr>
</tbody>
</table>

STUDENT PERFORMANCE EVALUATION
Description of the evaluation procedure

Written examination: 60%
Laboratory exercise: 40%
Optional job preparation and presentation of up to 24%, less than the proportion of written examination

ATTACHED BIBLIOGRAPHY

1) Ioannis D.Kofitsas, (1993), Elements of Construction Machinery, Athens: ION
2) Panagiotis Drakatou-Professor University of Athens, Construction Machinery