## COURSE OUTLINE

### (1) GENERAL

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>ENGINEERING SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACADEMIC UNIT</td>
<td>CIVIL ENGINEERING DEPARTMENT</td>
</tr>
<tr>
<td>LEVEL OF STUDIES</td>
<td>UNDER GRADUATE</td>
</tr>
<tr>
<td>COURSE CODE</td>
<td>2302507</td>
</tr>
<tr>
<td>SEMESTER</td>
<td>2°</td>
</tr>
<tr>
<td>COURSE TITLE</td>
<td>MATHEMATICS II</td>
</tr>
</tbody>
</table>

#### INDEPENDENT TEACHING ACTIVITIES

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weekly Teaching Hours</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Laboratory</td>
<td>2</td>
<td></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

General Background Course

#### PREREQUISITE COURSES:

YES (MATHEMATICS I)

#### LANGUAGE OF INSTRUCTION and EXAMINATIONS:

Greek (official)

#### IS THE COURSE OFFERED TO ERASMUS STUDENTS

No

#### COURSE WEBSITE (URL)

vplace.teipir.gr/pde_math2
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

MATHEMATICS II aims to enrich students’ abilities in the use of functions of many variables and their integrals, as well to recognize, classify and solve differential equations thus gaining a solid background for their endeavors in their discipline.

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, analysis and synthesis of data and information, using the necessary technologies.
Decision Making.
Autonomous work.

SYLLABUS

- MATHEMATICAL ANALYSIS II


- DIFFERENTIAL EQUATIONS


- MATLAB.
TEACHING and LEARNING METHODS - EVALUATION

DELIVERY
Face-to-face, Distance learning, etc.
Lectures and exercises, face-to-face.

USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
Use of ICT in teaching, laboratory education, communication with students
1. Teaching using ICT (MATLAB)
2. Communication and Electronic Submission.

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>
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</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>52</td>
</tr>
<tr>
<td>Laboratory Exercises</td>
<td>26</td>
</tr>
<tr>
<td>Preparation for Writing laboratory reports-homework.</td>
<td>15</td>
</tr>
<tr>
<td>Preparation for Homework on case studies(individual or group work)</td>
<td>14</td>
</tr>
<tr>
<td>Personal study</td>
<td>68</td>
</tr>
<tr>
<td>Course total</td>
<td>175</td>
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</tbody>
</table>

STUDENT PERFORMANCE EVALUATION
Description of the evaluation procedure
Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other
Specifically-defined evaluation criteria are given, and if and where they are accessible to students.

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

ATTACHED BIBLIOGRAPHY