COURSE DESCRIPTION

GENERAL

<table>
<thead>
<tr>
<th>LEISURE</th>
<th>POLYTECHNIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART</td>
<td>COMPUTER ENGINEERING &amp; INFORMATICS</td>
</tr>
<tr>
<td>LEVEL OF EDUCATION</td>
<td>BACHELOR</td>
</tr>
<tr>
<td>LESSON CODE</td>
<td>CEID_NE5367</td>
</tr>
<tr>
<td>SEMESTER OF STUDIES</td>
<td>Fall</td>
</tr>
<tr>
<td>COURSE TITLE</td>
<td>ADVANCED INFORMATION SYSTEMS</td>
</tr>
</tbody>
</table>

SELF TEACHING ACTIVITIES
in the case of credits being awarded in distinct parts of the course eg. Lectures, Laboratory Exercises, etc. If credit units are awarded uniformly for the whole course, indicate the weekly hours of teaching and the total number of credits

<table>
<thead>
<tr>
<th>WEEKS</th>
<th>HOURS</th>
<th>D. N. ASKALIAS</th>
<th>CREDIT UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures, Laboratory Exercises, Assisted work</td>
<td>2(l), 1(le), 2(aw)</td>
<td>5</td>
<td></td>
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</tbody>
</table>

Add rows if needed. The teaching organization and the teaching methods used are described in detail at 4.

COURSE TYPE
Background, General Knowledge, Scientific Area, Skills Development

PREREQUISITE COURSES:
There are no prerequisite courses. Recommended prerequisite knowledge: Mathematical Databases and Networks

C. LOSSA

TEACHING and EXAMINATION:
HELLENIC. Exams for ERASMUS students are offered in English.

THE COURSE IS OFFERED TO ERASMUS STUDENTS
YES

ELECTRONIC COURSE PAGE (URL)

LEARNING RESULTS

Learning results
The learning outcomes of the course describe the specific knowledge, skills and competences of an appropriate level that students will acquire after successfully completing the course.
Refer to Appendix A.

- Description of the level of learning outcomes for each cycle of study according to the European Higher Education Area Qualifications Framework
- Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Annex B.
- Curriculum Vitae Summary Guide

Learning outcomes of the course
At the end of this course the student will:
1. have been introduced into the philosophy of using information technology at individual levels of administration,
2. have met the new requirements of organizations by software engineers,
3. have understood the problems in developing advanced information systems,
4. have been briefed on a series of successful and unsuccessful applications of advanced information systems,
5. have the ability to guide the changes brought about by technology developments.

Skills
At the end of the course, the student will have further developed the following skills:
1. the ability to demonstrate knowledge and understanding of the problems of developing advanced information systems,
2. the ability to apply methodologically this knowledge to understand and solve practical problems,
3. the ability to demonstrate knowledge, understanding and practical solutions in all areas through the development of advanced information systems,
4. the ability to work with others to solve everyday problems

General Capabilities

Considering the general competencies that the graduate must have acquired (as listed in the Diploma Supplement and listed below), which one(s) the course is intended for?

Search, analyze and synthesize data and information, using the necessary technologies
Adapt to new situations
Decision making
Autonomous work
Teamwork
Work in an international environment
Working in an interdisciplinary environment
Producing new research ideas

Project design and management
Respect for diversity and multiculturalism
Respect for the natural environment
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Exercise of criticism and self-criticism
Promote free, creative and inductive thinking

Search, analyze and synthesize data, information and knowledge using the necessary software systems
Making decisions with different time horizons and content
Independent study of empirical practices
Team work and social work
Design and management of advanced information systems
Carried STEP dialogue and development of critical thinking

COURSE CONTENT

The course combines the new, ever-changing needs of organizations with their impact on the work of software engineers and vice versa. The rapid reduction of the time horizon of reaction to the changes that take place and their impact on the organization of production and sales, on planning activities, on control and on administration itself requires the development of advanced information systems. In particular, there are cases of use of mechanical learning, data analysis, large data processing, and “internet of things” technologies in operational, superior and top level decision making. Starting from setting the price of a new product or service and ending with after-sales support. Problems and techniques are solved in the implementation of data warehouse, content management, workflow control, etc. Finally, the impact of the development of advanced systems in the social field is analyzed.

TEACHING AND LEARNING METHODS - EVALUATION

<table>
<thead>
<tr>
<th>delivery method</th>
<th>Face to Face, Distance Learning, etc.</th>
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</thead>
<tbody>
<tr>
<td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</td>
<td>Information and communication technologies are used to communicate with students. E_class, e_mail and forum are used</td>
</tr>
<tr>
<td>TEACHING ORGANIZATION</td>
<td>Activity</td>
</tr>
<tr>
<td>Describe in detail the way and methods of teaching.</td>
<td>Lectures</td>
</tr>
<tr>
<td>Lectures, Seminars, Laboratory Exercise, Field Exercise, Study &amp; Analysis of Bibliography, Tutorial, Practice (Placement), Clinical Exercise, Artistic Lab, Interactive Teaching, Educational Visits, Project Work, etc.</td>
<td>Assisted work</td>
</tr>
<tr>
<td>Enter the hours of student study each learning activity and the non-guided study hours that</td>
<td>Laboratory exercise</td>
</tr>
<tr>
<td></td>
<td>Self-study and preparation</td>
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<tr>
<td></td>
<td>Weekend study</td>
</tr>
<tr>
<td></td>
<td>Preparing notes and examinations</td>
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<tr>
<td></td>
<td>Organizing an educational trip</td>
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the total workload in half level corresponds to the standards of ECTS.

<table>
<thead>
<tr>
<th>Total of course</th>
<th>182</th>
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### ASSESSMENT OF STUDENTS

**Description of the evaluation process**

- Final examination (2/3 of the total grade) including judgment questions
- Individual work (1/3 of the total grade)
- The evaluation criteria are included in the lesson notes

Certainly identified evaluation criteria are stated and if they are accessible to students.

### RECOMMENDED - BIBLIOGRAPHY

- **Suggested Bibliography:**
  - Notes by the teacher
  - **Summer scientific journals:**
    - ACM Transactions on Information Systems
    - International Journal on Semantic Web and Information Systems
    - European Journal of Information Systems
    - Journal of Intelligent Information Systems
    - Journal of Strategic Information Systems
    - Management Information Systems Quarterly