COURSE DESCRIPTION

GENERALLY

SCHOOL POLYTECHNIC
DEPARTMENT COMPUTER ENGINEERING and INFORMATICS
LEVEL OF EDUCATION BACHELOR
LESSON CODE CEID_ NE4357 SEMESTER OF STUDIES WINTER (7)
COURSE TITLE APPLIED INFORMATION SYSTEMS I

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>Lectures, Laboratory Exercises, Assistance</th>
<th>WEEKS</th>
<th>HOURS</th>
<th>D. N. ASKALIAS</th>
<th>CREDIT UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2(L), 1(LE), 2(A)</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

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

COURSE TYPE Skills Development

PREREQUISITE COURSES:

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

TEACHING LANGUAGE 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.
● Curricular Vitae Summary Guide

Learning outcomes of the course

At the end of this course the student will:

1. Be introduced to the world of basic operations (BPMN) of an organization and
   their modeling,
2. have been aware of the ways of restructuring processes (BPR) and their influence
   on choosing the architecture of the information system,
3. have understood the principles of behavior and ways of achieving
   flexibility (agile) and active participation in the development of the system,
4. have been informed of IT developments and the requirements of the public and
   private sector by an engineer,
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. ability to demonstrate knowledge and understanding of the main types of
information systems,
2. ability to apply methodologically this knowledge to understand and solve practical problems,
3. ability to demonstrate knowledge, understanding and analysis of an organization’s needs and requirements,
4. ability to work with others to solve 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 | Project design and management |
| Adopt to new situations | Respect for diversity and multiculturalism |
| Decision making | Demonstration of social, professional and moral responsibility and sensitivity to gender issues |
| Autonomous work | Exercise of criticism and self-criticism |
| Teamwork | Promote free, creative and inductive thinking |
| Work in an international environment | |
| Working in an interdisciplinary environment | |
| Producing new research ideas | |

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 information technology projects
Carried Xport dialogue and development of critical thinking

COURSE CONTENT
The course examines a number of issues related to the process of developing Information Systems (IS). Specifically, in the period prior to the design of a new system, where it is required:
1. The bottom-up and reverse study of the organization’s activities for the purpose of the new technologies (IoT, ML, Data analytics, Big date etc.) restructuring of processes that will aim to reduce operating costs, increase efficiency and quality.
2. Consideration of issues related to the choice of the appropriate architectural system, ie the architecture that will utilize private or public cloud infrastructure, will have at its core either the product, the customer or the service-oriented architecture, while around the core of the system will be installed a variety of central, regional and satellite systems, such as data quality control and metadata, communication and data sharing, information security systems n.
3. Mapping the space internally: production, sales and marketing systems, financial management, personnel management and integrated logistics. And external mapping, ie business resource and customer relationship management systems, knowledge management and decision support systems, by functionality, ie systems that support an organization’s relationships with the outside environment: supervising governmental and other service entities such as insurers.
4. The examination of qualifications and competencies, the selection and assignment of tasks to the developer of the computer system, the organization of project teams from both the IT and the organization side as final user, in order to achieve flexibility, active participation, positive and constructive cooperation climate, etc.

TEACHING AND LEARNING METHODS - EVALUATION
teaching.
Lectures, Seminars, Laboratory Exercise, Field Exercise, Study & Analysis of Bibliography, Tutorial, Practice (Placement), Clinical Exercise, Artistic Lab, Interactive Teaching, Educational Visits, Project Work, etc.; Enter the hours of student study each learning activity and the non-guided study hours that the total workload in half level corresponds to the standards of ECTS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>2 x 14 = 28</td>
</tr>
<tr>
<td>Assistance</td>
<td>1 x 14 = 14</td>
</tr>
<tr>
<td>Laboratory practice</td>
<td>2 x 14 = 28</td>
</tr>
<tr>
<td>Self-study and preparation</td>
<td>3 x 14 = 42</td>
</tr>
<tr>
<td>Weekend study</td>
<td>2 x 14 = 28</td>
</tr>
<tr>
<td>Preparing notes and examinations</td>
<td>3 x 10 = 30</td>
</tr>
<tr>
<td>Organizing an educational trip</td>
<td>3 x 4 = 12</td>
</tr>
<tr>
<td>Total</td>
<td>182</td>
</tr>
</tbody>
</table>

ASSESSMENT OF STUDENTS
Description of the evaluation process
Assessment Language, Assessment Methods, Formulation or Conclusion, Multiple Choice Test, Short Response Questions, Test Questions, Problem Solving, Written Work, Reporting / Reporting, Oral Examination, Public Presentation, Laboratory Work, Clinical Patient Examination, Artistic Interpretation, Other
Certainly identified evaluation criteria are stated and if they are accessible to students.

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

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 Strategically Information Systems
  - Management Information Systems Quarterly