**Content**

| Course Code | Course Name | Semester | Theory | Practice | Lab | Credit | ECTS |
|---|---|---|---|---|---|---|---|
| ING132-A | Computer Science I | 1 | 1 | 0 | 2 | 2 | 3 |

| | |
|---|---|
| Prerequisites | |
| Admission Requirements | |

| | |
|---|---|
| Language of Instruction | |
| Course Type | Compulsory |
| Course Level | Bachelor Degree |
| Objective | The course is composed of two parts. The aim of the first part is to theoretically introduce the notions of computer sciences. In the second part of the course, in the lab, the aim is to equip students with skills of utilization of computing tables. |
| Content | Week 1: Introduction to algorithms and their roles, history of computers.<br>Week 2: Data storage/ Introduction to tables of computing.<br>Week 3: Memory addressing/ Applications on tables of computing.<br>Week 4: Introduction to computer architecture/ Applications of formulas on computing tables.<br>Week 5: Program execution cycle/ Applications of pivot tables.<br>Week 6: Communication of peripheral units/ Applications of macros.<br>Week 7: Introduction to operating systems/ Applications of presentation tools.<br>Week 8: Midterm<br>Week 9: Operating system role.<br>Week 10: Interprocess management, the notion of security and virus.<br>Week 11: Network classifications and network topologies.<br>Week 12: Interprocess communication and introduction to distributed systems/ Homework presentations.<br>Week 13: Network protocols/ Homework presentations.<br>Week 14: Internet and WWW/ Homework presentations. |
| References | • J. Glenn Brookshear, Computer Science, An Overview, 9th Ed, Pearson, Addison Wesley, 2005. |

**Theory Topics**

| Week | Weekly Contents |
|---|---|
| 1 | Introduction to algorithms and their roles, history of computers |
| 2 | Data storage |
| 3 | Memory addressing |
| 4 | Introduction to computer architecture |
| 5 | Program execution cycle |
| 6 | Communication of peripheral units |
| 7 | Introduction to operating systems |
| 8 | Midterm exam |
| 9 | Operating system role |
| 10 | Interprocess management, the notion of security and virus |
| 11 | Network classifications and network topologies |
| 12 | Interprocess communication and introduction to distributed systems |

| Week | Weekly Contents |
| --- | --- |
| 13 | Network protocols |
| 14 | Internet and WWW |