



Technological Educational Institute of Messolonghi

Department of Applied
Informatics in Management
& Finance

[Educational and Professional Goals]

Messolonghi, 2010

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EDUCATIONAL AND PROFESSIONAL GOALS

The Department of Applied Informatics in Management and Finance offers to students knowledge and skills necessary to develop and implement Information Technology applications in the fields of Management and Finance. Consequently, a profound knowledge of both Information Technology and the subjects of Management, Business Administration and Economics is required and provided. The programme is also designed in order to provide to students with practical experience of available technologies and a thorough grounding in the principles of the subject enabling them to deal with future developments in this rapidly changing area.

The department is fortunate to have fully equipped laboratories and various computer labs that ensure students' training in high level computer languages programming (Pascal, C, C++, Java etc), operation systems, algorithms, data & file structure, e-commerce and analysis of information systems. The laboratories can also support the implementation of research programmes and the submission of students' final year dissertation.

The duration of studies is seven (7) semesters followed by one semester of practical training. The studies are considered completed after the elaboration and submission of a dissertation on a subject related to their field of studies.

Having acquired a specialized scientific and technical knowledge, graduates of the department of Applied Informatics in Management and Finance can work either self-reliantly or in cooperation with other scientists on issues of introduction, maintenance and expansion of Computer Science in the private and public sector. More specifically, their employment in companies or public corporations is focused on the application of modern scientific and technological methods in installation, expansion and preservation of computer systems and applications on the field of Administration and Economy; installation and preservation of supporting software for the right function of the operational system; management of Computer Science undertakings in business and organizations; planning and evaluation of computer systems policies in Administration and Economy. The graduates can work as members of the teaching staff in Secondary Education, according to the current legislation, and members of the Specialized Technical Staff in computer laboratories in Tertiary Education. They will also be able to offer valuable contribution to the Strategy Planning in Information Systems Development in both the private and public sector.

COURSE STRUCTURE DIAGRAM

| 1 st SEMESTER | | | | |
|--------------------------|--|------|-----------|-------------|
| Code | COURSE UNIT | TYPE | ECTS | HOURS |
| ΠΛ0100 | INTRODUCTION TO INFORMATION TECHNOLOGY | C | 4 | L2.E/P0.LW0 |
| ΓΕ0100 | MATHEMATICS I | C | 6 | L3.E/P2.LW0 |
| ΟΛ0100 | MICROECONOMICS | C | 5 | L2.E/P2.LW0 |
| ΓΕ1800 | BUSINESS ADMINISTRATION | C | 5 | L2.E/P2.LW0 |
| ΓΕ1700 | PRINCIPLES OF LAW | C | 4 | L2.E/P1.LW0 |
| ΠΛ0201 | COMPUTER PROGRAMMING I | C | 6 | L3.E/P0.LW2 |
| ΞΝ0101 | ENGLISH I | C | | L2.E/P1.LW0 |
| ΠΛ1101 | INFORMATION TECHNOLOGY AND SOCIETY | OC | | L2.E/P0.LW0 |
| ΟΛ1100 | EUROPEAN UNION AND ENTERPRISES | OC | | L2.E/P0.LW0 |
| TOTAL | | | 30 | |

| 2nd SEMESTER | | | | |
|--------------|--|------|-----------|-------------|
| Code | COURSE UNIT | TYPE | ECTS | HOURS |
| ΠΛ0202 | COMPUTER PROGRAMMING II ^{I(ΠΛ0201)} | C | 5 | L2.E/P0.LW2 |
| ΓΕ0300 | DATA & FILE STRUCTURES | C | 5 | L2.E/P0.LW2 |
| ΓΕ0200 | MATHEMATICS II | C | 5 | L2.E/P2.LW0 |
| ΓΕ0400 | STATISTICS I | C | 5 | L2.E/P2.LW0 |
| ΟΛ0200 | MACROECONOMICS | C | 4 | L2.E/P2.LW0 |
| ΟΛ1000 | BUSINESS ECONOMIC ANALYSIS | C | 6 | L3.E/P2.LW0 |
| ΞΝ0102 | ENGLISH II | C | | L2.E/P1.LW0 |
| ΓΕ2000 | FINANCIAL MATHEMATICS | OC | | L2.E/P0.LW0 |
| ΟΛ1200 | INTERNATIONAL TRADE | OC | | L2.E/P0.LW0 |
| TOTAL | | | 30 | |

| 3rd SEMESTER | | | | |
|--------------|--|------|-----------|-------------|
| Code | COURSE UNIT | TYPE | ECTS | HOURS |
| ΓΕ1100 | OPERATING SYSTEMS | C | 5 | L2.E/P0.LW2 |
| ΟΛ0900 | ALGORITHMS | C | 5 | L2.E/P0.LW2 |
| ΠΛ1201 | OBJECT-ORIENTED PROGRAMMING ^{I(ΠΛ0202)} | C | 5 | L2.E/P0.LW2 |
| ΓΕ2100 | STATISTICS II ^{I(ΓΕ0400)} | C | 6 | L3.E/P0.LW2 |
| ΟΛ0400 | GENERAL ACCOUNTING | C | 4 | L2.E/P2.LW0 |
| ΟΛ2000 | FINANCIAL MANAGEMENT | C | 5 | L3.E/P2.LW0 |
| ΞΝ0103 | ENGLISH II | C | | L2.E/P1.LW0 |
| ΟΛ2100 | ECONOMICS AND THE ENVIRONMENT | OC | | L2.E/P0.LW0 |
| ΟΛ2200 | POLITICAL ECONOMY | OC | | L2.E/P0.LW0 |
| TOTAL | | | 30 | |

| 4th SEMESTER | | | | |
|--------------|---|------|-----------|-------------|
| Code | COURSE UNIT | TYPE | ECTS | HOURS |
| ΓΕ0601 | DATABASE DESIGN I ^{I(ΓΕ0300)} | C | 6 | L3.E/P0.LW2 |
| ΓΕ1000 | COMPUTER NETWORKS | C | 5 | L2.E/P0.LW2 |
| ΠΛ1300 | INTERNET TECHNOLOGIES | C | 5 | L2.E/P0.LW2 |
| ΟΛ0600 | OPERATIONAL RESEARCH | C | 5 | L2.E/P2.LW0 |
| ΟΛ0550 | CORPORATE ACCOUNTING ^{I(ΟΛ0400)} | C | 5 | L2.E/P2.LW0 |
| ΓΕ1900 | MARKETING | CE* | 4 | L3.E/P0.LW0 |
| ΠΛ0300 | COMPUTER ARCHITECTURE | CE* | 4 | L3.E/P0.LW0 |
| ΓΕ1300 | COMPUTATIONAL MATHEMATICS | OC | | L2.E/P0.LW0 |
| ΓΕ0800 | COMPILERS | OC | | L2.E/P0.LW0 |
| TOTAL | | | 30 | |

- Compulsory Elective course units (CE) don't necessarily receive credits for the graduation and final degree

| 5th SEMESTER | | | | |
|--------------|---|------|-----------|-------------|
| Code | COURSE UNIT | TYPE | ECTS | HOURS |
| ΓΕ0602 | DATABASE DESIGN II ^{I(ΓΕ0601)} | SC | 6 | L2.E/P0.LW2 |
| ΠΛ1400 | EXPERT SYSTEMS & ARTIFICIAL INTELLIGENCE | SC | 4 | L2.E/P0.LW2 |
| ΠΛ0601 | ANALYSIS AND DESIGN OF INFORMATION SYSTEMS I | C | 5 | L2.E/P0.LW2 |
| ΠΛ1500 | MULTIMEDIA | SC | 5 | L2.E/P0.LW2 |
| ΟΛ0800 | ACCOUNTING INFORMATION SYSTEMS ^{I(ΟΛ0400)} | SC | 4 | L2.E/P0.LW2 |
| ΓΕ2200 | ECONOMETRICS | C | 6 | L2.E/P0.LW2 |
| ΓΕ1600 | BUSINESS COMMUNICATIONS | OC* | | L2.E/P0.LW0 |
| ΟΛ1300 | PUBLIC ADMINISTRATION & ADMINISTRATIVE LAW | OC | | L2.E/P0.LW0 |
| TOTAL | | | 30 | |

| 6th SEMESTER | | | | |
|--------------|--|------|-----------|-------------|
| Code | COURSE UNIT | TYPE | ECTS | HOURS |
| ΓΕ0601 | ANALYSIS AND DESIGN OF INFORMATION SYSTEMS II ^{I(ΠΛ0601)} | C | 7 | L3.E/P0.LW2 |
| ΓΕ1000 | MANAGEMENT INFORMATION SYSTEMS (MIS) | C | 7 | L2.E/P0.LW2 |
| ΠΛ1300 | E-COMMERCE | CE* | 6 | L2.E/P0.LW2 |
| ΟΛ0600 | HUMAN COMPUTER INTERACTION | CE* | 6 | L2.E/P2.LW0 |
| ΟΛ0550 | COMPUTER SYSTEMS PERFORMANCE EVALUATION | CE* | 6 | L2.E/P2.LW0 |
| ΓΕ1900 | DECISION SUPPORT SYSTEMS | CE* | 6 | L3.E/P0.LW0 |
| ΠΛ0300 | BUSINESS LAW | C | 5 | L3.E/P0.LW0 |
| ΓΕ1300 | OFFICE AUTOMATION | C | 5 | L2.E/P0.LW0 |
| ΠΛ1600 | INFORMATION TECHNOLOGY DIDACTICS | OC | | L2.E/P0.LW0 |
| ΓΕ0800 | BUSINESS PLANNING | OC | | L2.E/P0.LW0 |
| TOTAL | | | 30 | |

7th SEMESTER

| Code | COURSE UNIT | TYPE | ECTS | HOURS |
|--------------|---|------|-----------|-------------|
| ΓΕ1500 | GRADUATE SEMINAR | C | 5 | L2.E/P3.LW0 |
| ΠΛ0700 | INFORMATION SYSTEMS SECURITY | C | 6 | L3.E/P2.LW0 |
| ΠΛ0500 | IT PROJECT MANAGEMENT | C | 7 | L3.E/P2.LW0 |
| ΠΛ1700 | TELEMATICS IN MANAGEMENT ^{I(ΠΛ1500)} | CE* | 6 | L2.E/P2.LW0 |
| ΟΛ1900 | TOTAL QUALITY MANAGEMENT | CE* | 6 | L2.E/P2.LW0 |
| ΟΛ1800 | PRODUCTION MANAGEMENT | C | 6 | L3.E/P0.LW0 |
| ΠΛ1800 | LOGISTICS | CE* | 6 | L3.E/P0.LW0 |
| ΠΛ1900 | SIMULATION TECHNIQUES | OC | | L3.E/P0.LW0 |
| ΠΛ2000 | INFORMATION RETRIEVAL | OC | | L3.E/P0.LW0 |
| TOTAL | | | 30 | |

8th SEMESTER

| Code | COURSE UNIT | TYPE | ECTS | HOURS |
|--------------|--------------------|------|-----------|-------|
| | PRACTICAL TRAINING | C | 10 | |
| | THESIS | C | 20 | |
| TOTAL | | | 30 | |

COURSE UNITS OUTLINE

Department of Applied Informatics in Management and Finance

INTRODUCTION TO INFORMATION TECHNOLOGY

| | |
|--------------------------------|--|
| Code | ΠΛ0100 |
| Type | Compulsory (C) |
| Category | GBC |
| Year | A |
| Semester | A |
| Credits | 4 |
| Lecturer | |
| Objective | To introduce students to the basic concepts of information technology. To emphasize the factors which lead us to accept computers more and more and analyze the limitations of computer systems. |
| Prerequisites | NO |
| Course contents | Historical evolution of hardware and software. Structure and operation of computers (Hardware and software). Numerical systems, Codes, information representation. Machine language, symbolic language, 2nd, 3rd and 4th generation languages. Operating systems, applications of information systems. Influence of information technology on society and economy. |
| Bibliography | 1. El. Papathanasiou, 1998 : Elements of Computer Systems. Editions: Eug. Benou. 2. G. S. Ioannidis, Ch. Th. Panagiotakopoulos, 1994 : The Computer. Editions Kastanioti 3. Rechenberg P. & P. Drepaniotis, 1992 : Introduction to Information Technology. Athens : Kleidarithmos |
| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

MATHEMATICS I

| | |
|--------------------------------|--|
| Code | FE0100 |
| Type | Compulsory (C) |
| Category | GBC |
| Year | A |
| Semester | A |
| Credits | 6 |
| Lecturer | |
| Objective | To help students learn and assimilate the basic concepts of differential and integral calculus. |
| Prerequisites | No |
| Course contents | Sequences - series - Discrete Mathematics (general and recursion formula, arithmetic and exponential, factorial, combination analysis, sum of infinite geometric series of terms, absolute convergence of series). Functions of one variable (linear, square and polynomial function, trigonometric functions, exponential and logarithmic, function bound, continuity, derivative, and finding extreme points and inflection points, asymptotic behavior, function chart). Integral (indefinite, definite, applications). Taylor series (expansion around a point, radius of convergence, computing applications). |
| Bibliography | <ol style="list-style-type: none">1. M. Spivak: Differential and Absolute calculus, Academic publications of Crete2. M. Spiegel: Superior Mathematics (Schaum's outline series), ESPi Editorial. |
| Hours / Week | 5 (L=3, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written & Oral Examination |
| Language of Instruction | Greek |

MICROECONOMICS

| | |
|-----------------|----------------|
| Code | OA0100 |
| Type | Compulsory (C) |
| Category | GBC |
| Year | A |

| | |
|--------------------------------|--|
| Semester | A |
| Credits | 5 |
| Lecturer | |
| Objective | To teach students the microeconomic concept so that they apply rational decision making and problem solving in modern enterprises. |
| Prerequisites | |
| Course contents | Introduction to economics (methodology) and the economic system (Organization of the economic system, production possibilities, making economic decisions). Demand, offer, elasticity, price formation. Product production and production costs formation. Forms of Markets (characteristics and behavior of firms in each one of them). Price determination of production factors. |
| Bibliography | 1. Byrns, Stone: Economics II – Microeconomics. Editions «ION». 2. G. Ch. Kotti & A. Petraki-Kotti, 1996 : Introduction to modern microeconomics. Editions "To Oikonomiko". K. & P. Sbilias. Athens 3. Kottis G. & A. Kotti-Petraki, 2000 : Modern Microeconomics, theory and applications. Athens : E. Benou. 4. Varian H. 1996 : Intermediate Microeconomics, a modern approach. London : W. W. Norton. |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written & Oral Examination |
| Language of Instruction | Greek |

BUSINESS ADMINISTRATION

| | |
|------------------|--|
| Code | ΓΕ1800 |
| Type | Compulsory (C) |
| Category | GBC |
| Year | A |
| Semester | A |
| Credits | 5 |
| Lecturer | |
| Objective | To teach students the basic concepts and practical applications of business administration and make them able to plan a business plan adapted to a |

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| | changing environment. |
| Prerequisites | No |
| Course contents | <p>Introductory concepts: Business and management (concept, discriminations, description, history, Greek companies)</p> <p>Business environment and social responsibility</p> <p>Operational functions: Planning (strategies configuration and implementation), Organization - Recruitment, Management (Leadership, Motivation, Communication, Working Groups), Control.</p> <p>Strategic decision making</p> <p>Crisis and changes management</p> <p>Time management</p> <p>Information and knowledge management</p> <p>Risk management, TQM</p> <p>Application of management concepts in Greek business and International management - Case studies</p> |
| Textbooks | <ol style="list-style-type: none"> 1. K. and A.M. Tzortzaki: Organization and Management. Editions:Rosili. Athens, 2007. 2. Montana & B.H. Charnov: Management. Editions: Kleidarithmos. Athens, 2000. |
| Bibliography | <ol style="list-style-type: none"> 1. Sun Tzu: The art of war. Editions:Papasotiriou. Athens, 2008. 2. The Mafia manager. Editions Periplous. Athens, 2000. 3. P.F. Drucker: Management challenges for the 21st century. Editions Leader books. Athens 2000. 4. Profetis: Meta-Management. Editions Printshop. Athens, 2007. 5. Schermerhorn: Management. Editions John Wiley. London, 2004. 6. Harris, Lock, Rees/Mpariami: Machiavelli in modern marketing and management. Editions Periplous. Athens 2002. |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

PRINCIPLES OF LAW

| | |
|-------------|---------------|
| Code | ΓΕ1700 |
|-------------|---------------|

| | |
|--------------------------------|---|
| Type | Compulsory (C) |
| Category | GBC |
| Year | A |
| Semester | A |
| Credits | 4 |
| Lecturer | |
| Objective | To introduce students to the basic concepts and different areas of law. Private law and in particular Civil Law are emphasized, so as students acquire the necessary professional and broader knowledge on trading relationships. |
| Prerequisites | No |
| Course contents | Introduction to the basic concepts and discriminations of law. European law. Public, Private Law. Civil Law: General Principles, Contract Law, Property Law |
| Bibliography | <ol style="list-style-type: none"> 1. P. Agalopoulou: Basic concepts of Civil Law. Editions Sakkoulas, 2003 2. A Varka Adami: Introduction to Civil Law. Editions Sakkoulas. Athens-Komotini 2005. 3. N. DimarasQ Introduction to Civil Law, Civil Law Studies, Athens Patras 2008. 4. S. Drosopoulou: Civil law. Editions Interbooks. Athens 1995. 5. G. Mentis, N. Sarris: Introduction to Law and Civil law. Editions Ellin. Athens 2004. 6. E. Mihelaki: Introduction to Law and the science of law. Athens 1968. 7. D. Mylonopoulos: Elements of Law Public Private. Editions A. Stamoulis, Athens 2006. 8. Spyridakis, Contributions of Civil Law Editions Sakkoulas. Athens 1999 9. M. Stathopoulos, M. Aygoustianakis, Introduction to civil law. Editions Sakkoulas, 1992 |
| Hours / Week | 3 (L=2, E/P=1) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

COMPUTER PROGRAMMING I

| | |
|--------------------------------|--|
| Code | ΠΛ0201 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | A |
| Semester | A |
| Credits | 6 |
| Lecturer | |
| Objective | Introduction to the basic principles of programming languages and programming algorithmical problems. |
| Prerequisites | No |
| Course contents | Evolution of programming languages. Basic algorithm elements (consequence, selection, repetition). Input, output instructions. Constants, variables, arrays. Principles of structured programming. Procedures and functions. Structures and pointers. File management. Applications using C. |
| Bibliography | <ol style="list-style-type: none">1. P. Papazoglou, 1994 : How to learn programming in Turbo Pascal. Editions «ION».2. Introduction and applications of Turbo Pascal. SWAN.3. Marco Cantu : Complete manual of Delphi 5. Athens : M. Giourdas.4. Halvorson M. & D. Rygmyr, 1992 : Guide of Microsoft Qbasic. Athens : Kleidarithmos.5. Hergert D. 1989 : Programming with Microsoft Quick basic Athens : Kleidarithmos.6. Quick basic Manual of use for the editions 4.5 and 4.0. Athens : Kleidarithmos. |
| Hours / Week | 5 (L=3, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

ENGLISH I

| | |
|-----------------|----------------|
| Code | EN0101 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | A |
| Semester | A |

| | |
|--------------------------------|--|
| Credits | |
| Lecturer | |
| Objective | To develop and improve the basic English skills in written and oral speech. Long-term objective is to develop skills that will cover students needs in the academic field, the professional world and in their international contacts. |
| Prerequisites | No |
| Course contents | Student oriented English teaching on the subject of computer science at primary level. Developing reading and writing skills and grammar teaching. Vocabulary teaching emphasising on the terminology of computer science. |
| Bibliography | 1. E.Balla: Notes on Information Systems. 2000 |
| Hours / Week | 3 (L=2, E/P=1) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

INFORMATION TECHNOLOGY AND SOCIETY

| | |
|------------------------|---|
| Code | EN0101 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | A |
| Semester | A |
| Credits | |
| Lecturer | |
| Objective | To familiarize students, through the problem of Noam Chomsky, on the key issues in the interdisciplinary field of Cognitive Sciences as Linguistics, Computer Science and Neuroscience, and to learn the basic texts and decisions of the European Union on the directions and the strategy of Information Technology and Telecommunications (ICT) and the Information Society. |
| Prerequisites | No |
| Course contents | <ul style="list-style-type: none"> • Basic concepts and issues of linguistic theory. • Some language and mind aspects. • Fundamental principles of language and brain. • "The Minimalist program": a new statement in the history of linguistics. • Linguistics and Computing. |

- John von Newmann, Noam Chomsky and Alan Turing biographies.
- The e-Europe initiative.
- The i2010 strategy- European Information Society for the development and employment.
- The electronic economy effect on the European enterprises.
- Intellectual property and related rights in the Information Society.

Bibliography

1. Noam Chomsky. On nature and language, Papathimas Editions, Athina, 2004.
2. The e-Europe initiative. Directorate-General for Press and Communication
3. The i2010 strategy- European Information Society for the development and employment. European Committee Announcement in the Council, the European Parliament, the European Economic and Social Committee and the Committee of Regions, COM (2005).
4. The electronic economy effect on the European enterprises. European Committee Announcement in the Council and the European Parliament. COM (2001) 711
5. Intellectual property and related rights in the Information Society. European Parliament Directive 2001/29/EP, of 22nd May 2001.
6. G. Kalas. The information society and the new role of social sciences, Nefeli Editions, Athens, 2006

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| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

ENTERPRISES IN THE E.U.

| | |
|-----------------|--------------------------|
| Code | OA1100 |
| Type | Compulsory Elective (CE) |
| Category | MELA |
| Year | A |
| Semester | A |
| Credits | |
| Lecturer | |

| | |
|--------------------------------|---|
| Objective | To offer students knowledge on the role of the European Union in the development of enterprises. The students will be able to understand the evolutions that take place in European level. |
| Prerequisites | No |
| Course contents | Institutional bodies and services of the European Union. The role of the European Union in the development of the countries. Operational programs of the European Union. Regulations and enterprise models. The European Union and small or medium enterprises. |
| Bibliography | <ol style="list-style-type: none"> 1. "International Economic Organisms (and European Union)", Zaxariadis Souras, Stamoulis Editions 2. European Union-Basic Texts, Sahpekidou, Sakkoula Editions |
| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

COMPUTER PROGRAMMING II

| | |
|------------------------|---|
| Code | ΠΛ0202 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | A |
| Semester | B |
| Credits | 5 |
| Lecturer | |
| Objective | To offer students more experience on programming by using C++, a more difficult programming language, studying concepts such as pointers, memory management, data types and classes. |
| Prerequisites | Computer Programming I |
| Course contents | Basic elements of C++ . Constants, variables, operators, representations. Program control instructions. Arrays, strings, indices, functions. Input, output and files. Advanced data types, data types defined by the user. Dynamic distribution, advanced operators. Object-Oriented programming and classes. Applications using C++. |
| Bibliography | <ol style="list-style-type: none"> 1. H.M.Deitel, P.J.Deitel: C++ Programming. 2. R. Lafore: Object Oriented programming |

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| | using C++. Editions Kleidarithmos. |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

DATA AND FILE STRUCTURES

| | |
|--------------------------------|---|
| Code | ΓΕ0300 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | A |
| Semester | B |
| Credits | 5 |
| Lecturer | |
| Objective | To help students acquire theoretical and practical knowledge in order to achieve the most efficient data representation leading to programs of high quality documentation. |
| Prerequisites | No |
| Course contents | Data types and databases. Arrays, strings. Simple linked list, double list. Queues, stacks. Binary trees. Search trees and search and sorting algorithms. Graphs and graph algorithms. Memory management. Basic concepts of files. Means of storage. Sequential files, relevant files, sorted files, indexed sequential files, tree files of indexes (operations and algorithms). Applications using programming languages. |
| Bibliography | <ol style="list-style-type: none"> 1. Koilias Ch. 1993 : Data structures and file organizations. Athens : Nees Technologies 2. Data structures, Algorithms and applications in C++, SAHNI SARTAJ, Tziola Editions, 2004, Athens |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

MATHEMATICS II

| | |
|--------------------------------|--|
| Code | ΓΕ0200 |
| Type | Compulsory (C) |
| Category | GBC |
| Year | A |
| Semester | B |
| Credits | 5 |
| Lecturer | |
| Objective | To introduce students to the basic concepts of Linear Algebra. |
| Prerequisites | Mathematics I |
| Course contents | Introduction to Linear Algebra. Algebraic structures. Vectorial spaces. Matrices. Linear systems. Linear systems solving by using the Cramer method and the Gauss algorithm. Characteristic values and characteristic vectors. Diagonalization of a square matrix. Applications. |
| Bibliography | 1. G. B. Thomas – R. L. Finney, 1984 : Calculus and Analytic Geometry. Addison-Wesley. 2. G. A. Athanasiadi, 1984 : Linear Algebra. Thessaloniki. 3. D. G. Stratigopoulou, 1980 : Linear Algebra. Patra. |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

STATISTICS I

| | |
|------------------------|---|
| Code | ΓΕ0400 |
| Type | Compulsory (C) |
| Category | GBC |
| Year | A |
| Semester | B |
| Credits | 5 |
| Lecturer | |
| Objective | Teaching the basic concepts of descriptive statistics, estimation and probability theory. Practical applications with the use of computers. |
| Prerequisites | No |
| Course contents | Data types and databases. Measurability levels definition of statistical data. Collection classification and presentation of |

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| | <p>statistical data Arrays and diagrams. Empirical data distributions. Position and dispersion measures. Propensities. Measures of asymmetry. Elements of the probability theory. Sampling techniques. Theoretical distributions. Normal distribution and normal distribution properties. Central limit theorem. Introduction to estimation. Confidence intervals for average prices, proportions and dispersions. Computer applications using statistical package.</p> |
| Bibliography | <ol style="list-style-type: none"> 1. W. C. Cochran, 1953 : Sampling Techniques. Wiley. 2. M. G. Kendall, A. Stuart, 1974 : The advanced theory of statistics. Griffin LTD. 3. G. W. L. Snedecor, 1965 : Statistical Methods. Wiley. 4. Th. Cacoulos : Statistics, Theory and Application. Athens. |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

MACROECONOMICS

| | |
|------------------------|---|
| Code | 0A0200 |
| Type | Compulsory (C) |
| Category | GBC |
| Year | A |
| Semester | B |
| Credits | 4 |
| Lecturer | |
| Objective | To familiarise students with the models and the policies of macroeconomic concepts. |
| Prerequisites | No |
| Course contents | Introduction to macroeconomic analysis (employment, prices and economic stability). Measurement of economic activity. Income and the |

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| | theory of employment. Imbalance of income and employment. The monetary system. Monetary policy, macroeconomic stabilization. Economic development. Investment models and economic dynamics. Models of long standing balance. Economic cycle models. |
| Bibliography | <ol style="list-style-type: none"> 1. A. Kotti-Petraki, 1995 : Macroeconomics – Theories and Proposals of Policy. Athens: Stamoulis. 2. Th. Lianos, Th. Benos, 1998 : Macroeconomic theory and policy. Athens: Stamoulis. 3. S. Saradithis, 1995 : Modern macroeconomic analysis Vol. B' (Macroeconomic patterns). Athens: Stamoulis. 4. Gr. Mankiw, 1997 : Macroeconomic theory. Vol. A'. Athens : Gutenberg. 5. Wil. Branson, 1995 : Macroeconomic theory. Athens : Stamoulis. |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

BUSINESS ECONOMIC ANALYSIS

| | |
|------------------------|---|
| Code | ΟΛ1000 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | A |
| Semester | B |
| Credits | 6 |
| Lecturer | |
| Objective | To familiarize students with the market and enterprise operation mechanisms so that they can make right enterprise decisions. |
| Prerequisites | No |
| Course contents | Introduction to the content and the methodology of economic analysis. Market operation mechanisms. Consumer behaviour and theory of goods demand. Production and cost theory. Introduction to market forms. Production economics. Enterprise operations and enterprise administration. Presentation of enterprises' figures and economic activities. Enterprise decisions criteria. |
| Bibliography | <ol style="list-style-type: none"> 1. P. Pavlopoulos: Economic theory B: Theory of |

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| | consumer behaviour. Editions Sakkoulas. Athens 1982 |
| | 2. K. Magnisalis, 1997 : Consumer behaviour. Athens : Stamoulis. Siomkos, 1994 : Consumer behaviour and marketing strategy vol. A & B. Athens : Stamoulis. |
| | 3. Siomkos, 1995 Consumer behaviour and strategic marketing v.A: Stamoulis |
| | 4. Siomkos, 1995 Consumer behaviour and strategic marketing v.B: Stamoulis |
| | 5. G. Siomkos, 1994 : Introduction to strategic marketing. Athens : Stamoulis |
| Hours / Week | 5 (L=3, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

ENGLISH II

| | |
|------------------------|--|
| Code | EN0102 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | A |
| Semester | B |
| Credits | |
| Lecturer | |
| Objective | Development and improvement of the linguistic skills aiming at successful communication at a scientific level. Language practice aiming at acquiring accuracy and fluency in general and specific knowledge, such as: computer structure and usage, software/hardware, programming information, functions of computers, computer programs. |
| Prerequisites | No |
| Course contents | English for Computing at intermediate level. Basic skills practice emphasizing on oral communication. Use of authentic material and activities related to the specific level of students' knowledge and their job domain. Principles and practice information using appropriate oral and written exercises. |
| Bibliography | 1. Eric Glendinning & John McEwan: Basic English for Computing. Oxford University Press |
| Hours / Week | 3 (L=2, E/P=1) |

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| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

FINANCIAL MATHEMATICS

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|--------------------------------|--|
| Code | FE2000 |
| Type | Optional (OC) |
| Category | GBC |
| Year | A |
| Semester | B |
| Credits | 2 |
| Lecturer | |
| Objective | Students should learn and assimilate the basic concepts of applied mathematics in finance. |
| Prerequisites | No |
| Course contents | Simple interests. Simple interest calculation. Problems in finding the medium rate. Internal and external title discounting. The concept of the real interest discounting rate. Value or equivalence equations. Compound interest, equivalence qualities in compound interest, general theory of simple interest and compound interest. Accumulation rate. Continual capitalization. Annuities, calculation of the initial and final value of overdue annuity, problem solving of annuities with the use of difference equations, future annuity, calculation of the initial and final value of future advanced annuity, fractional annuities. Loans, basic kinds of loans, variable interest loans, bond loan, housing loans. |
| Bibliography | 1. N. Alexandris, 1989 : Financial Mathematics. Athens 2. Ch. Fragos, 1998 : Financial Mathematics. |
| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

OPERATING SYSTEMS

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|--------------------------------|---|
| Code | FE1100 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | B |
| Semester | C |
| Credits | 5 |
| Lecturer | |
| Objective | The students will learn the concepts of designing Operational Systems and will come in contact with the modern Operational Systems. |
| Prerequisites | No |
| Course contents | <ul style="list-style-type: none">• Preview of operating systems.• Introduction to operating systems.• Description & control of operations.• Threads, Symmetrical multiprocessing and Microcores.• Identification-Mutual exclusion• Synchronization-Deadlock & Extended Deprivation• Memory management• Virtual memory• Central Processing Unit routing |
| Bibliography | <ol style="list-style-type: none">1. N. Alexandris: Financial Mathematics. Athens 1989.2. Ch. Fragos: Financial Mathematics 1998 |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

ALGORITHMS

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|------------------|---|
| Code | OA0900 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | B |
| Semester | C |
| Credits | 5 |
| Lecturer | |
| Objective | To familiarize students with basic algorithm concepts and help them to find solutions to well defined problems. |

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| Prerequisites | No |
| Course contents | Basic concepts of algorithms. Categorization of problems in categories (P, NP, etc). Retrospection. Sorting, search, selection and integration. Introduction to NP-complete, NP-Hard problems. Exhausting search. Approximate algorithms and guaranteed output algorithms. |
| Bibliography | <ol style="list-style-type: none"> 1. Th. Papatheodorou, 1998 : Algorithms, Introductory Subjects and Examples. Patra : Patra University. 2. Aho, Hopcroft, Ulman, 1974 : Design and Analysis of Computer Algorithms. Addison Welsey. 3. Robert Sedgewik, 1984 : Algorithms. Addison Welsey. 4. Wilf. S. Herbert, 1986 : Algorithms and Complexity. Prentice Hal |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

OBJECT- ORIENTED PROGRAMMING

| | |
|------------------------|--|
| Code | ΠΛ1201 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | B |
| Semester | C |
| Credits | 5 |
| Lecturer | |
| Objective | Students' familiarisation with object - oriented programming and the development of practical skills developing applications and web applications using Java. |
| Prerequisites | Computer Programming II |
| Course contents | <p>Introduction to object-oriented programming and differences with the classical structured programming.</p> <p>Familiarisation with the basic concepts of object-oriented programming (Classes, Objects, Polymorphism)</p> <p>hierarchy of classes</p> <p>Packages</p> |

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| | Java programming (Expressions, Data Types, Objects Lists, Logic, and Loops, Classes and methods, Classes and constructors, Packages and other characteristics of classes, threads and exceptions, libraries in JAVA) |
| Bibliography | <ol style="list-style-type: none"> 1. Lema, Cadenhead, Complete Handbook of Java 2, 3rd publication, ISBN 9605123762, Publications M. Gkiourdas, 2003. 2. Deitel, Deitel, Java Planning, 6th publication, ISBN 9605123797, Publications M. Gkiourdas, 2005. 3. Herbert Schildt, Java 2, 3rd publication, ISBN 9605124984, Publications M. Gkiourdas, 2007. |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

STATISTICS II

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|------------------------|--|
| Code | ΓΕ2100 |
| Type | Compulsory (C) |
| Category | GBC |
| Year | B |
| Semester | C |
| Credits | 6 |
| Lecturer | |
| Objective | To introduce students to applied statistical analysis and the practical applications with the use of computers. |
| Prerequisites | Statistics I |
| Course contents | Introduction to inductive statistics and case controls. Basic concepts. Tests of average prices and proportions. Testing the difference between two average prices in independent and dependent samples. Testing the difference between two proportions. Testing equality in dispersions. X ² -tests for independence. X ² -tests for goodness of fit. Introduction to variance analysis. Variance analysis to one and to two factors. Non-parametric tests. Applications by means of a computers statistical package. |
| Bibliography | <ol style="list-style-type: none"> 1. M. G. Kendall, A. Stuart, 1974 : The advanced theory of statistics. Griffin LTD. |

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| | <ol style="list-style-type: none"> 2. G. W. L. Snedecor, 1965 : Statistical Methods. Wiley. 3. Th. Cacoulos : Statistics, Theory and application. Athens. 4. H. Kebork : Statistics. Athens. |
| Hours / Week | 5 (L=3, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

GENERAL ACCOUNTING

| | |
|--------------------------------|---|
| Code | ΟΛ0400 |
| Type | Compulsory (C) |
| Category | GBC |
| Year | B |
| Semester | C |
| Credits | 4 |
| Lecturer | |
| Objective | To introduce students to the basic concepts of General Accounting. |
| Prerequisites | No |
| Course contents | Introduction to the concepts of accountancy. The economic situation of enterprises. Discrimination and analysis of accounts of accountant sector according to the Greek General Accountant Drawing. Accountant Books and Elements. Practice with problems. Balance-sheet. |
| Bibliography | <ol style="list-style-type: none"> 1. A. Kontakou: General accounting. Editions Ellin 2001. 2. M. Leontari: General accounting. Editions Pamisos 2002. 3. D. Gkinoglou, P. Taxynakis, S. Moisi: General Financial Accounting. Editions Rosili 2005. 4. K. Kardakaris: General accounting. Editions Ion 2009. 5. D. Karagiannis, I. Karagiannis, A. Karagianni: Examples of Implementation and Analysis of General Accounting Plan to Implementation. Editions private edition. |
| Hours / Week | 4 (L=2, E/P=2)) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

FINANCIAL MANAGEMENT

| | |
|------------------------|--|
| Code | ΟΛ2000 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | B |
| Semester | C |
| Credits | 5 |
| Lecturer | |
| Objective | To teach students the analysis of the enterprises financial operation and adopt a financial "reasonable" in addressing the corresponding problems so as to be able to take relevant decisions. |
| Prerequisites | No |
| Course contents | Basic financial concepts and theory of money Basic concepts of banking and monetary policy Time, risk and performance evaluation Budget and Evaluation Investment (ARR, PP, NPV, PI, IRR, CEA, CAPM, simulation techniques) Capital structure and dividend policy Analysis of the business financial environment Sources and forms of short and long-term financing (Leasing, factoring) Financial reports and financial indicators Basic concepts of international financial (portfolio composition, foreign exchange, futures market, arbitrage, mechanisms crisis) |
| Bibliography | <ol style="list-style-type: none">1. E.J. McLaney: Business Finance for decision makers. Editions Pitman. London 1991.2. J.A. Tracy: Financial management. Editions Gkiourdas. Athens 2000.3. Fabozzi, Petterson, Habegger: Financial Management & Analysis workbook. Editions Kritiki. Athens 2008.4. Berman, Knight, Case: Financial Intelligence. Editions Kritiki. Athens 20008.5. B.P. Malindretou: Modern financial products. Editions Papazisi. Athens 2003.6. P.X. Alexopoulou: Introduction to financial derivatives. Editions Stamouli. Athens 2005.7. G.K. Filippatou, P.I. Athanasopoulou: Introduction to financial administration. Editions Papazisi. Athens 1985. |
| Textbooks | <ol style="list-style-type: none">1. A.A.Gropelli & E. Nikbakht: Financial management. Editions Kleidarithmos. Athens 2003. |

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| | 2. J.F. Weston & E.F. Brigham: Basic principles of financial management and policy. Editions Papazisi 1982. |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

ENGLISH III

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|--------------------------------|--|
| Code | EN0103 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | B |
| Semester | C |
| Credits | |
| Lecturer | |
| Objective | To teach students the language used in computing and information systems. Particular emphasis is placed on the terminology used, as well as on oral communication. |
| Prerequisites | No |
| Course contents | English for Computing at an advanced level. Principles and practice in computing specialist vocabulary. Tasks to practise communicative skills. |
| Bibliography | 1. P. Charles Brown & Keith Boeckner, 1993: Oxford English for Computing. Oxford University Press |
| Hours / Week | 3 (L=2, E/P=1) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

ECONOMICS AND THE ENVIRONMENT

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| Code | OL2100 |
| Type | Optional (OC) |
| Category | SBC |
| Year | B |
| Semester | C |
| Credits | 2 |

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| Lecturer | |
| Objective | To make the student understand the ways of using economic models in order to analyse the use of natural resources. |
| Prerequisites | No |
| Course contents | Economics and environment. Methodological speculation and types of approach. Basic concepts of welfare economics. Environment pollution and the economic theory of its protection. Economic analysis of natural resources usage. Economics of energy. Economic development and natural resources exhaustion. Use of profit-cost analysis and economic models in the study of the environment and natural resources. Review of alternative theory for the environment and the natural resources. |
| Bibliography | 1. P. Charles Brown & Keith Boeckner, 1999: Oxford English for Computing. Oxford University Press |
| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

POLITICAL ECONOMY

| | |
|------------------------|--|
| Code | 0A2200 |
| Type | Optional (OC) |
| Category | SBC |
| Year | B |
| Semester | C |
| Credits | |
| Lecturer | |
| Objective | To enable students to understand the basic principles and theories of political economy and apply the principles and the methodologies of political economy to the understanding, interpretation and solution of economic problems. |
| Prerequisites | No |
| Course contents | Wealth accumulation and distribution as the central matter of the Political Economy Science. The ancestors of political economy (mercantilists, physiocrats). W. Petty as the ancestor of political economy: the first early statement of a theory of value. Smith and the first cohesive study of the |

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| | relation between production, circulation and distribution and the statement of an explicit – though contradictory- value theory of abstract labour (qualitative dimension of value). The problem of market and prices and the problem of measuring value (quantitative dimension of value). Ricardo and the value theory of the embodied labour. Value theory in separation from the theory of distribution (the theory of surplus). Marx and the critique of political economy. Dialectical method and value theory of abstract labour. Surplus value, capital and money. Accumulation and reproduction of capital. Competition and the transformation of value to production price and of the rate surplus value to profit rate. |
| Bibliography | <ol style="list-style-type: none"> 1. G. Stamatis, 1997: Introduction to Political Economy. Athens: Stamoulis. 2. Th. Georgakopoulos -Th. Lianos, 1998 : Introduction to Political Economy. Athens: Stamoulis. 3. I. Kallioras, 1998: International Political Economy. Athens: Stamoulis. |
| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

DATABASE DESIGN I

| | |
|------------------------|---|
| Code | FE0601 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | B |
| Semester | D |
| Credits | 6 |
| Lecturer | |
| Objective | To familiarize students with the Database Management Systems and the advantages of their application. |
| Prerequisites | Data & File Structures |
| Course contents | Basic principles of Databases Management Systems. Data independence. Architectural levels of model ANSI – SPARC. Users of database management systems. |

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| | Types of database management systems. Hierarchical-network-relational model Entities-Relationship diagram (E-R) The SQL language. |
| Bibliography | <ol style="list-style-type: none"> 1. Giorgopoulos, Malamas, Gkiourdas: Database Systems, The complete theory of databases. Athens 2004. 2. R. ELMARSI, S.B. NAVATHE: Fundamental principles of database systems, volume A', 5th publication. Editions Diavlos. Athens 2007. 3. Introduction to databases v.A Kleidarithmos 4. Database Systems. Ullman. 5. Elmasri, Navathe: Fundamentals of database systems. Editions The Benjamin Cummings Publishing Company, Inc. 1994 |
| Textbooks | <ol style="list-style-type: none"> 1. Giorgopoulos, Malamas, Gkiourdas: Database Systems, The complete theory of databases. Athens 2004. 2. R. ELMARSI, S.B. NAVATHE: Fundamental principles of database systems, volume A', 5th publication. Editions Diavlos. Athens 2007. |
| Hours / Week | 5 (L=3, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

COMPUTER NETWORKS

| | |
|------------------------|--|
| Code | ΓΕ1000 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | B |
| Semester | D |
| Credits | 6 |
| Lecturer | |
| Objective | To familiarize students with the concepts of networks so that they will be able to propose the appropriate network solutions. |
| Prerequisites | No |
| Course contents | History and Uses of Computer Networks Architecture, Services, Protocols and layering The OSI Reference Model and Reference Model TCP |

/ IP
 Transmission means
 Local asynchronous communication and long distance communication
 Switching and multiplexing
 Packages, boxes, and error detection
 Technologies and local area networks topology (LAN)
 Material addressing and frame type identification
 Wiring, physical topology and connectivity of LAN equipment
 Extending the LAN: fiber optic modems, repeaters, bridges and switches
 Digital technologies local loop and long distance
 WAN technologies and routing
 Ligament and ATM networking
 Network Features: Ownership, performance and service model
 Networking: Concepts, architecture and protocols
 Addressing in TCP / IP (IPv4 and IPv6)
 Assignment of protocol addresses - ARP
 Independent IP packets and their forwarding
 Encapsulation, fragmentation and reassembly of the IP
 Error Reporting Mechanism - ICMP
 Transport protocol - TCP & UDP
 Routing in the Internet
 Management and network security

Bibliography

1. D. E. Comer: Computer networks and internets and their applications at the internet. Editions Kleidarithmos. 2007.
2. S. Tanenbaum A: Computer Networks 4th edition. Editions Kleidarithmos. 2003.
3. W. Stallings: Data Computer Communications 8th edition. Editions Prentice Hall 2007.
4. R.W. Stevens, UNIX Network Programming, 2nd edition, Prentice Hall

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| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

INTERNET TECHNOLOGIES

| | |
|------------------------|--|
| Code | ΠΛ1300 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | B |
| Semester | D |
| Credits | 5 |
| Lecturer | |
| Objective | To make students familiar with the basic concepts of the internet and web, to understand their usefulness and make them able to design, develop and maintain web applications using similar technologies. |
| Prerequisites | No |
| Course contents | <p>The history of the Internet and World Wide Web</p> <p>Basic concepts of the Internet (Reference Model, Services, Architecture, Protocols)</p> <p>Fundamental components and architecture of the Web</p> <p>Addressing and Routing in the Internet</p> <p>Web Hosts (WWW Servers, Proxy servers)</p> <p>Web Browsers (WWW Browsers)</p> <p>Web markup languages (HTML, CHITML, XML)</p> <p>Identification Language for Web pages appearance: CSS</p> <p>Client-side programming: DOM, Javascript, Java Applets, Flash</p> <p>Server-side programming: PHP, ASP, JSP, Java Servlets, Perl</p> <p>Web hosts interconnection with databases</p> <p>Designing web pages & web sites</p> <p>Web Usability</p> <p>Principles for website development</p> <p>Applications: Intranets, Extranets, Electronic Commerce, Tele-education</p> <p>Advanced topics for the representation and exchange of information and services: XML, AJAX, Semantic Web, Web Services</p> <p>Prospects for the Internet and World Wide Web</p> |
| Bibliography | <ol style="list-style-type: none">1. X. Douligeris, E. Kopanaki & P. Mavropodi: Internet Technologies - Principles and Applications for Programming on the Internet. Editions Niriides 2004.2. L. Welling & L. Thomson: Web application development using PHP and MySQL, 3rd edition. |

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| | Editions Gkiourdas 2005. |
| | 3. A. Karakos: Internet, world wide web & programming techniques. Editions Gkiourdas 2005. |
| | 4. T. Berners, Lee: The Framework of Web of Science. 2007 |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

OPERATIONAL RESEARCH

| | |
|--------------------------------|--|
| Code | ΟΛ0600 |
| Type | Compulsory (C) |
| Category | GBC |
| Year | B |
| Semester | D |
| Credits | 5 |
| Lecturer | |
| Objective | To introduce students to the stochastic models of operational research. |
| Prerequisites | No |
| Course contents | Introduction to Linear Programming. Simplex method, sensitivity analysis, duality theory. Elements of optimization in networks. Shortest path problem, maximum flow problem, minimum cost flow problem, critical path method. Dynamic programming. Theory of games. Time programming of projects. Applications by means of computer packages. |
| Bibliography | <ol style="list-style-type: none"> 1. H. A. Taha, 1967 : Operation Research-An Introduction, 2nd edition. Collier-Macmillan, New York. 2. N. Kanavou, 1986 : Financial Programming – Operation Research I and II. TEI of Patras. 3. Ch. E. Botsari, 1981 : Operation Research - Methods and Problems. Athens. |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

CORPORATE ACCOUNTING

| | |
|--------------------------------|---|
| Code | OA0550 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | B |
| Semester | D |
| Credits | 5 |
| Lecturer | |
| Objective | Upon completion of this course the student is able to: To review the accounting depiction for the accounting events in a company. To keep certain accounting books. Is familiar with accounting procedures of establishing, interruption and merge of companies. |
| Course contents | General introduction to the establishment of companies (legal terms)-all topics (eg creation, operation, management, rights, obligations of partners). The accounting in management and companies management. General introduction to accounting firms. Particular topics of companies. Accounting of establishing Companies (WTO, EU, Ltd, SA). Accounting firms: raising and lowering the capital of all companies. Distribution of profits - problems for all companies. Insurance claims for all companies. |
| Bibliography | <ol style="list-style-type: none">1. A. Alexiou-Mastrogiannopoulou, 1997 : Corporate Accounting. Athens : Hellin.2. G. Sfakianos, 1991 : Commercial corporate accounting. Athens : Stamoulis.3. D. Kaounis : Accounting in corporate companies. Athens : Synchroni Ekdotiki. |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

MARKETING

| | |
|--------------------------------|---|
| Code | ΓΕ1900 |
| Type | Compulsory Elective (CE) |
| Category | SBC |
| Year | B |
| Semester | D |
| Credits | 4 |
| Lecturer | |
| Objective | To introduce students to the basic concepts of marketing presenting the operations and the problems in marketing that a modern manager should be able to solve. |
| Prerequisites | No |
| Course contents | Introduction, definition, concept and content of marketing. The position of marketing in the organizational structure of the enterprise. Consumer behaviour, marketing and market research. Market segmentation, information system and products management. Pricing policies, product distribution and marketing channels. New product development strategy and the life cycle of a new product. Communication – promotion policy (advertising, sales promotion, public relations, selling, sponsoring). |
| Bibliography | <ol style="list-style-type: none">1. K. Tzortzaki & Al. Tzortzaki, 2001 : Marketing Management. Rosili2. Introduction to marketing and the market survey, Tomaras, 20063. A. Tsaklaganos : Principles of Marketing. Thessaloniki : Kyriakidi.4. BLYTHE JIM, “Introduction to marketing”, Kleidarithmos, 2002 |
| Hours / Week | 3 (L=3) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

COMPUTER ARCHITECTURE

| | |
|-------------|---------------|
| Code | ΠΛ0300 |
|-------------|---------------|

| | |
|--------------------------------|---|
| Type | Compulsory Elective (CE) |
| Category | GBC |
| Year | B |
| Semester | D |
| Credits | 4 |
| Lecturer | |
| Objective | To offer students deep understanding of structured organisation and the levels of computers. Particular accent is given in the inferior levels, in the level of digital logic and in CPU planning. There is also a reference in designing parallel computers. |
| Prerequisites | No |
| Course contents | <ul style="list-style-type: none"> - Structured Computer Organisation - Computer Systems Organisation - Processors - Primary Store - Secondary Store - Input-output of Computer Systems - Digital Logic Level - Gateways and Boole Algebra - Basic Digital Logic Circuits - Memory circuits - Micro Architecture Level - Architecture Level of Instruction sets - Operating Systems Machine Level - Symbolic Language Level - Parallel Computer Architectures - Parallel Computer Design. |
| Bibliography | <ol style="list-style-type: none"> 1. Andrew S. Tatenbaum, Computer Architecture: A structured Approach, Klitharimos Editions. Athens 2002 2. D. Patterson, J. Hennessy. Organisation and Designing of Computers, A and B Volume, Klitharimos Editions, Athens |
| Hours / Week | 3 (L=3) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

COMPUTATIONAL MATHEMATICS

| | |
|-----------------|---------------|
| Code | ΓΕ0800 |
| Type | Optional (OC) |
| Category | SBC |

| | |
|--------------------------------|---|
| Year | B |
| Semester | D |
| Credits | |
| Lecturer | |
| Objective | Learning of numerical methods for the solution of linear and non-linear problems. |
| Prerequisites | No |
| Course contents | Introduction to computational methods. Errors. Calculation of the function prices of one or more variables. Series according to Taylor and McLaurin. Numerical solution of equations. Linear systems of equations, normal equations, iterative processes, unequal systems of equations. Numerical derivation and integration. Methods for the numerical solution of differential equations. Applications by means of computer packages. |
| Bibliography | <ol style="list-style-type: none"> 1. Akrivis G. & B. Dougalis, 1998 : Introduction to numerical analysis. University Editions of Crete. 2. F. Scheid, 1976 : Numerical Analysis. Schaum's Outline Series, McGraw-Hill, ESPI, Athens. 3. Ch. N. Fragaki, 1984 : Methods of Numerical Analysis. Thessaloniki. |
| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

COMPILERS

| | |
|------------------|--|
| Code | ΓΕ1300 |
| Type | Optional (OC) |
| Category | SC |
| Year | B |
| Semester | D |
| Credits | 2 |
| Lecturer | |
| Objective | A compiler is an intuitive program that translates a high level language (easy to use by a programmer) to low-level languages (machine language). An accessible example to those who know programming is the compiler of the programming language C. |

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| | <p>The aim of this course is the transmission of theoretical and practical knowledge, and familiarity with tools & programs that are useful in building a compiler. To achieve this goal, the prevailing current main phases of compilers, such as verbal, semantic & syntactic analysis, production of intermediate & optimize code will be studied in detail. The students will also study theoretical study learning tools, like this syntax analysis, and grammar.</p> <p>Students who choose the course should have basic knowledge in programming, Algorithms, Databases and computer architecture.</p> |
| Prerequisites | No |
| Course contents | Structure of compilers. Verbal analysis. Automatics. Regular expressions. Syntactical analysis. Grammars. Syntactical trees. Predicted top-down syntax analysis. Factorial. Left retroactivity. Bottom-up syntax analysis. Semantic analysis. Control of types. Interface code generation. Machine code. |
| Bibliography | <ol style="list-style-type: none"> 1. K.E. Lazos, P.T. Katsaros, Z.K. Karaiskos. Compilers: theory & practice. 3rd edition, Thessaloniki 2004. 2. A.N.S. Papaspyrou, E.s. Skordalakis. Compilers. Editions Simmetria 2002. 3. B.V. Aho, M. S. Lam, R. Sethi and J. D. Ullman. Compilers: Principles, Techniques and Tools. 2nd edition, Addison-Wesley, 2007. 4. A.W. Appel and M. Ginsburg. Modern Compiler Implementation in C. Cambridge University Press, 1998. 5. D. Grune, H. E. Bal, C. J. H. Jacobs and K. G. Langendoen. Modern Compiler Design. John Wiley and Sons, 2000. 6. S. S. Muchnick. Advanced Compiler Design and Implementation. Morgan Kaufmann Publishers, 1997. |
| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

DATABASE DESIGN II

| | |
|--------------------------------|--|
| Code | FE0602 |
| Type | Compulsory (C) |
| Category | SC |
| Year | C |
| Semester | E |
| Credits | 6 |
| Lecturer | |
| Objective | The aim of this course is an in depth analysis of the characteristics of the relational model and the presentation of design tools of the E-R model. Furthermore, there is an extensive reference to the object-oriented bases. |
| Prerequisites | Database Design I |
| Course contents | Description of the ER model and relational model. Detailed description of the language SQL (Structured Query Language) and its potential. SQL commands for data management (create tables, modify tables, delete tables, insert data, update data, delete data, data recovery). |
| Bibliography | <ol style="list-style-type: none">1. R. ELMARSI, S.B. NAVATHE: Fundamental Principles of Database Systems, Volume A', 5th edition. Editions Diavlos. Athens 2007.2. R. ELMARSI, S.B. NAVATHE: Fundamental Principles of Database Systems, Volume B', 5th edition. Editions Diavlos. Athens 2007.3. T. CONN OLY, C. BEGGQ: Databases Volume A. Editions Gkiourdas 2008.4. T. CONN OLY, C. BEGGQ: Databases Volume B. Editions Gkiourdas 2008.5. Korth, O. Leslie: Database Systems, Editions Gkiourdas, 2003. |
| Textbooks: | <ol style="list-style-type: none">1. R. ELMARSI, S.B. NAVATHE: Fundamental Principles of Database Systems, Volume A', 5th edition. Editions Diavlos. Athens 2007.2. R. ELMARSI, S.B. NAVATHE: Fundamental Principles of Database Systems, Volume B', 5th edition. Editions Diavlos. Athens 2007. |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

EXPERT SYSTEMS AND ARTIFICIAL INTELLIGENCE

| | |
|--------------------------------|--|
| Code | ΠΛ1400 |
| Type | Compulsory (C) |
| Category | SC |
| Year | C |
| Semester | E |
| Credits | 4 |
| Lecturer | |
| Objective | To familiarise students with the fields of artificial intelligence application (programming of intelligence in computer systems) and knowledge of the structure and operation of expert systems (software systems that exhibit intelligent behavior in specialized fields). |
| Prerequisites | No |
| Course contents | Ways of Knowledge representation in calculating systems and technical solutions. Principles of neural networks, fuzzy logic and genetic algorithms. In the laboratory of the course the students are taught planning rules, using an expert system shell CLIPS, Jess the script language that allows adding rules in systems software based on Java, and extending FuzzyJess, to handle ambiguity. |
| Bibliography | <ol style="list-style-type: none">1. Vlahavas, Kefalas, Vasileiadis, Kokkoras, Sakellariou, "Artificial Intelligence", 3rd Edition, V. Gkiourdas Editorial, 2006, ISBN 960-387-431-02. Russel P., Norvig P., "Artificial Intelligence - a Modern Approach", Second American Publication. Editions Kleidarithmos 2004, ISBN 960-209-873-23. Matsatsinis, Spanoydakis, Samaras, "Introduction in the Artificial Intelligence And in Multiple Agents Systems", Publications of New Technologies, 2005, ISBN 960-8105-77-3 |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

ANALYSIS AND DESIGN OF INFORMATION SYSTEMS I

| | |
|--------------------------------|---|
| Code | ΠΛ0601 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | C |
| Semester | E |
| Credits | 5 |
| Lecturer | |
| Objective | To enable students to recognize the stages of an information system development as well as the methodologies which are dominant nowadays and the tools that support them. |
| Prerequisites | No |
| Course contents | The life cycle of a system. System analysis methods. Design tools Case tools. Examples and applications. |
| Bibliography | <ol style="list-style-type: none">1. Chatzoglou P.: Computer System Analysis and Design Methods. Editions ION.2. Whitten, Bentley: System Analysis and Design Methods. McGraw Hill.1998. |
| Textbooks | <ol style="list-style-type: none">1. Fitzgerald and D. Avison: Information Systems: Methodologies, techniques and development tools, v.A, Editions Nees technologies. Athens 20062. Fitzgerald and D. Avison: Information Systems: Methodologies, techniques and development tools, v.B, Editions Nees technologies. Athens 2006 |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

MULTIMEDIA

| | |
|------------------|--|
| Code | ΠΛ1500 |
| Type | Compulsory (C) |
| Category | SC |
| Year | C |
| Semester | E |
| Credits | 5 |
| Lecturer | |
| Objective | To enable students to learn the methods of |

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| | digitalisation, storage and compaction of multimedia information, the equivalent digital files, as well as the technologies of their reproduction. The students will be able to process multimedia files and implement multimedia applications. |
| Prerequisites | No |
| Course contents | Digitization of analog signals. Properties, compression and file types, audio, image and video. Technologies for hardware design and representation of multimedia information-reproduction. Environments processing multimedia files and multimedia applications development. |
| Bibliography | <ol style="list-style-type: none"> 1. Dimitriadis, Pomportsis, Triantafillou: Multimedia technology – Theory and application. Tziola Edition, Thessaloniki, 2004. 2. Lazarinis : Multimedia technologies, Kleidarithmos Edition, 2007 3. Li, Drew: Fundamentals of Multimedia, ISBN: 0130618721, Prentice-Hall, 2004. |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

ACCOUNTING INFORMATION SYSTEMS

| | |
|------------------------|--|
| Code | 0A0800 |
| Type | Compulsory (C) |
| Category | SC |
| Year | C |
| Semester | E |
| Credits | 4 |
| Lecturer | |
| Objective | The modern technologies have created a continuously evolving environment in the AIS, which the organisms are compelled to watch so that they remain competitive. The student will learn the design, the application, the operation and the control of the AIS. |
| Prerequisites | General Accounting |
| Course contents | Estimation of the use of accounting information |

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| | <p>systems for the achievement of enterprising objectives, and how they improve the design and the control of the enterprise.</p> <p>Examination of the methodologies of system analysis and design so that the role of the expert in designing accountant information systems will be understandable.</p> <p>Development of basic dexterities in the documentation of systems</p> <p>Development of analysis and report ability in the internal control system</p> <p>Familiarization in the environment of computerised enterprising applications</p> <p>Contact with modern perceptions on issues ERP, CRM, SCM</p> |
| Bibliography | <ol style="list-style-type: none"> 1. Nikolaou, Mpenou: Accounting Information Systems. 1999 2. Gkinoglou, Taxynakis, Protogeris: Accounting Information Systems - Computerized Accounting. Editions Rosili 2004. 3. Limperis: Notes of introduction in Accounting Information Systems 2004. 4. Accounting Information Systems 10/e, Romney-Steinbart, Prentice Hall 2005. |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

ECONOMETRICS

| | |
|----------------------|--|
| Code | FE2200 |
| Type | Compulsory (C) |
| Category | SBC |
| Year | C |
| Semester | E |
| Credits | 6 |
| Lecturer | |
| Objective | To introduce students to linear regression and the uses of linear models in economic data. Computer applications using mathematical and statistical package. |
| Prerequisites | No |

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| Course contents | Simple linear regression. Basic conditions for the use of linear regression models. Method of least squares. Normal equations. Assessment rates of linear model. Properties of the linear regression of the sample. Coefficient of determination, correlation coefficient. Idiotites estimators. Control model. Confidence intervals of coefficients of the linear model. Confidence intervals of the expected and projected prices. Multivariate regression. Simple and multiple linear regression. |
| Bibliography | <ol style="list-style-type: none"> 1. Th. Kontis: Business Communications: Applied organization and management. Editions Stamoulis. 2. Lehman C., W. Himstreet & W. Baty: Business Communications. Editions Stamoulis. 1999. 3. C. Kanellopoulos: Corporate communications. Editions Stamoulis. 1995. |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

BUSINESS COMMUNICATIONS

| | |
|------------------------|--|
| Code | ΓΕ1600 |
| Type | Optional (OC) |
| Category | SC |
| Year | C |
| Semester | E |
| Credits | 2 |
| Lecturer | |
| Objective | Make the student able to use internal and external communication policies of the company |
| Prerequisites | No |
| Course contents | Concept, principles and distinctions of communication. Internal and external communication. Students' practice in creating documents, composing commercial letters and reports, taking the minutes of administration bodies, preparing and presenting a portfolio. Transmission systems. Filing systems. |
| Bibliography | <ol style="list-style-type: none"> 1. Th. Kontis, 1995 : Business Communications: Applied organization and management. Athens : |

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| | Synchroni Ekdotiki. |
| | 2. Lehman C., W. Himstreet & W. Baty, 1995 : Business Communications. Athens : Hellin. |
| | 3. Ch. Kanellopoulos, 1995 : Intra-business Communications. Athens : Stamoulis. |
| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

PUBLIC ADMINISTRATION & ADMINISTRATIVE LAW

| | |
|--------------------------------|---|
| Code | ΟΛ1300 |
| Type | Optional (OC) |
| Category | SC |
| Year | C |
| Semester | E |
| Credits | 2 |
| Lecturer | |
| Objective | To teach students the structures of Public Administration and the general principles of administrative law. |
| Prerequisites | No |
| Course contents | Historical review. Definition and meaning of public administration. Organizational structure and the division of powers, business activity and public administration financing. Economic policy and public servants. Definition, concept and general principles of the administrative law. Comparison and resources of the administrative law. Administrative activities. Administrative justice. |
| Bibliography | <ol style="list-style-type: none"> 1. Dagoglou : General Administrative Law. 2. Makrydimitris : Administration and Society, Public Administration in Greece. 3. Th. G. Konti, 1997 : Introduction to Public Administration. Athens : Synchroni Ekdotiki. |
| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

ANALYSIS AND DESIGN OF INFORMATION SYSTEMS II

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|--------------------------------|--|
| Code | ΠΛ0602 |
| Type | Compulsory (C) |
| Category | SC |
| Year | C |
| Semester | F |
| Credits | 7 |
| Lecturer | |
| Objective | To train students on the information systems development methodologies that they are going to use when participating in leading information system development groups. |
| Prerequisites | Analysis & Design of Information Systems I (ΠΛ0601) |
| Course contents | Detailed presentation of the Information Systems development methodologies with emphasis on the use of methodologies and technical requirements analysis to take the requirements and use object-oriented methodologies with particular emphasis on the use of the unified modeling language, UML. Comparison and comments on methodologies. Implementation: Mandatory requirements analysis and design information system of any student. |
| Bibliography | <ol style="list-style-type: none">1. Malaga, Ross A., Gkiourdas M.:Introduction in the information system technology. Athens 2004.2. Avison, David, Fitzgerald, Guy: Advanced information systems. Editions New technologies. Athens 2006. |
| Textbooks | <ol style="list-style-type: none">1. Malaga, Ross A., Gkiourdas M.:Introduction in the information system technology. Athens 2004.2. Avison, David, Fitzgerald, Guy: Advanced information systems. Editions New technologies. Athens 2006. |
| Hours / Week | 5 (L=3, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

MANAGEMENT INFORMATION SYSTEMS (MIS)

| | |
|------------------------|--|
| Code | ΠΛ0800 |
| Type | Compulsory (C) |
| Category | SC |
| Year | C |
| Semester | F |
| Credits | 7 |
| Lecturer | |
| Objective | <p>The Information Systems are essential for the administration of enterprises and the offer of useful products and services. The growth of the Internet, the globalisation of transactions, the rise of economies of information and the digital completion restructure particularly the role of information systems in the enterprises and in the administration. These changes lead to completely digital enterprises where all the operational processes are digitally supported. Thus the knowledge round the information systems constitutes a basic condition for each type of enterprising activity.</p> <p>Aim of course is learn the important operational processes and the applications of technology of information systems in the decision-making.</p> <p>Also the students will be supposed to know the technologies that are used for the achievement of digital completion and the infrastructure of technology of information and communications on the growth and operation of informative systems of administration in the frames of emerging digital enterprises.</p> |
| Prerequisites | No |
| Course contents | Administration of digital enterprise. Information Systems in the Enterprise. Information Systems, Organisms, Management and Strategy. Digital Enterprise: Electronic Commerce. Completion of operational applications and enterprising activities. Management of knowledge in the digital enterprise. Improvement of decision-making for the digital enterprise. Redesign of organism using the information systems. Comprehension of enterprising value of systems and management of change. Safety and control of information systems. |
| Bibliography | 1. Ross A. Malaga: Introduction to the technology of information systems. Editions Gkiourdas. Athens 2005. |

2. Folinas, Manthou: Complete information systems of enterprising resources management. Editions Anikoula, Thessaloniki 2007.

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| Textbooks | <ol style="list-style-type: none"> 1. Laudon K. C., Laudon J. P.: Management Information Systems, 6th edition. Editions Kleidarithmos. Athens 2006. 2. Oikonomou, Georgopoulos, Mpenou: Management Information Systems, management, information, system. Athens 2004. |
| Hours / Week | 5 (L=3, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

ELECTRONIC COMMERCE

| | |
|-----------------|--------------------------|
| Code | ΓΕ1200 |
| Type | Compulsory Elective (CE) |
| Category | SC |
| Year | C |
| Semester | F |
| Credits | 6 |

Lecturer

Objective

To present the way Internet technologies can be used today to create successful business models so that an enterprise becomes an e-business. Specifically, the educational objectives of the course are knowledge and skills acquisition.

In the knowledge level the students after the comprehensive monitoring of the course should:
have understood the key issues related to e-business and e-commerce

know the methodology design and development of such applications

have acquired considerable familiarity with the necessary technologies

know the basic design principles of user-friendly applications

In the level of skills students should:

define the functional requirements of e-commerce applications

develop and implement e-commerce applications
evaluate the usability of an online store

Prerequisites No

Course contents During the course the following subjects will be presented: definitions and historical data for the development of Internet and e-business and commerce, basic business models, features of an online store, technologies used, security and safety, legal issues, etc. There will also be referred detailed instructions for evaluating the usability of electronic stores and the basic principles of personalization and recommendation. Finally successful and unsuccessful examples of e-shops (case studies) will be described.

Bibliography

1. Abbott, S. (1999). The Debate for Secure E-Commerce. *Performance Computing*, 17(2): 37-42.
2. Adam, N., Dogramaci, O., Gangopadhyay, A., & Yesha, Y. (1999). *Electronic Commerce, Technical, Business, and Legal Issues*. Prentice Hall Inc, ISBN: 0139490825.
3. Amor, D. (2001). *The E-Business (R)evolution: Living and Working in an Interconnected World*. Prentice Hall, ISBN 0130670391.
4. Chan, H., Dillon, T., Lee, R., & Chang, E. (2001). *Electronic Commerce: Fundamentals & Applications*. John Wiley & Sons, ISBN 0471493031.
5. Cuthbert, M. (2000). The Six Basic Types of E-Shoppers. *E-Commerce Times*, <http://www.ecommercetimes.com/story/4430.html>.
6. Cutler, M., & Sterne, J. (2000). *E-Metrics: Business Metrics for the New Economy*. NetGene-sis Corporation, <http://www.targeting.com/emetrics.pdf>.
7. Jones, D., & Scott, M. (2002). *Special Edition Using Microsoft Commerce Server 2002*. ISBN: 0789727633.
8. Kohavi, R., Mason, L., Parekh, R., & Zheng, Z. (2004). Lessons and Challenges from Mining Retail E-Commerce Data. *Machine Learning Journal*, Special Issue on Data Mining Lessons Learned, <http://robotics.stanford.edu/~ronnyk/lessonsInDM.pdf>.

Textbooks

1. K. Markellos, P. Markellou, M. Rigkou, S. Syrmakesis, & A. Tsakalidis: *e-business: from the idea to the implementation*, Editions Ellinika grammata. 2006

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| | 2. D. Chaffey : E-business and e-commerce. Editions Kleidarithmos. 2008. |
| Hours / Week | 5 (L=3, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

HUMAN – COMPUTER INTERACTION

| | |
|-----------------|--------------------------|
| Code | ΠΛ0400 |
| Type | Compulsory Elective (CE) |
| Category | SC |
| Year | C |
| Semester | F |
| Credits | 6 |

Lecturer

Objective

The Human-Machine communication covers the subject of Human-Computer Interaction. The Human-Computer Interaction is the cognitive area of computer studying the design, development and evaluation of interactive computer systems ie systems that interact with their users (ACM SIGCHI, "Curriculum for Human-Computer Interaction", Special Interest Group on Computer-Human Interaction Curriculum Development Group, New York, 1992).

However, when talking about human computer interaction we don't necessarily talk about a single user with a personal computer. The term "user" can mean a user, a group of users working together, or a range of users in an organization that everyone involved in any part of a task or procedure. The user is anyone trying to complete a task using the technology. With the term "computer" we mean any technology ranging from conventional personal computer to a large-scale computer system, a process control system or an embedded system. The system can not contain computer parts including other people. The term "interaction" we mean any communication between a user and a computer, regardless of whether the direct or indirect. The direct interaction is related to dialogue, feedback and control throughout the course of a job. Indirect

interaction may refer to background or batch processing. The important and common to all of these scenarios is that the user needs to interact with the computer to achieve something. As part of the course refers to cognitive concepts related to humans, such as how to think, remember, watch and react. Furthermore, key principles of usability and system design guidelines for applications. Finally we refer to the assessment methodologies both during the design phase and the implementation systems phase.

Prerequisites

No

Course contents

Introduction to human-computer communication
Cognitive Reports
Design Principles of Interactive Systems
Planning assessment
Implementation evaluations
The GOMS Family Model
Web Design
Web Usability and Design
Design Navigation in the Internet
Design for All - Design for Disabled
Accessibility
Design Guidelines for People with Special Needs and elderly

Bibliography

1. Shneiderman Ben: Designing the User Interface-Strategies for Effective HCI. Editions Addison-Wesley. 1998
2. N. Avouris: Introduction to the human computer communication. Editions Diavlos. Athens 2000.
3. Vincent Flanders, Michael Willis: Web Pages That Suck, Sybex International, March 1998.
4. Preece Jenny, Royers Yvonne, Sharp Helen, Holland Simon, Carey Tom: Human - Computer Interaction. Addison - Wedsley ,1994
5. Nielsen Jacob: Designing Web Usability. Editions New Riders, 2000
6. Dix Alan, Finlay Janet, Abowd Gregory, Beale Russell: Human Computer Interaction. Editions Prentice Hall, 1998
7. Nielsen Jacob: Usability Engineering. Editions Morgan Kaufmann Publishers, 1993.

Textbooks

1. Syrmakesis: Human computer interaction.

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| | Editions Ellinika Grammata. 2003. 2. Akoumianakis: User-computer interface: a modern approach. Editions Kleidarithmos. Athens 2006. |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

COMPUTER SYSTEMS PERFORMANCE EVALUATION

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|--------------------------------|---|
| Code | ΠΛ1000 |
| Type | Compulsory Elective (CE) |
| Category | SC |
| Year | C |
| Semester | F |
| Credits | 6 |
| Lecturer | |
| Objective | To introduce students to the concept of computer systems performance evaluation and the methodological tools which are used towards this goal. |
| Prerequisites | No |
| Course contents | Fundamental concepts of performance evaluation methodologies. Distributions, schedule, performance measures. Models of computer systems (Markov chains), etc. Simulation, random numbers production, statistical analysis of results. Parameters calculation and assessment. Computer systems performance models. Model of deterministic analysis performance. Estimating performance measures. |
| Bibliography | <ol style="list-style-type: none"> 1. Raj Jain : The Art of Computer Systems Performance Analysis. 2. D. Mensce, V. Almeida, 1998 : Web Performance. Prentice Hall. 3. A. Law, W. D. Kelton, 1991 : Simulation Modeling & Analysis. McGraw Hill. |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

DECISION SUPPORT SYSTEMS

| | |
|--------------------------------|--|
| Code | OA1600 |
| Type | Compulsory Elective (CE) |
| Category | SC |
| Year | C |
| Semester | F |
| Credits | 6 |
| Lecturer | |
| Objective | To enable students to understand the design methods of integrated computer decision support systems in situations of semi-structured or unstructured problems. Moreover, to apply the above to the study of executive decisions in which a number of effectiveness criteria should be considered. |
| Prerequisites | No |
| Course contents | Decision making, systems, models and support. Review of decision support systems, their basic sub-systems and their classification. Methods and tools of constructing decision support systems, the principle of repetition and adjustment to the above methodologies. Analytical presentation of several applications (simulation and analysis with multi-criteria). Modellization and model subsystems. Data subsystem. Interface subsystem and interaction. The technique of "what-if" analysis. Decision support systems for groups. Application and integration of decision support systems, executive information systems, integration by means of other technologies and information systems. |
| Bibliography | <ol style="list-style-type: none">1. K. Zopounidis, M. Doubos & N. Matsatsinis, 1996 : Multi-criteria intelligent decision support systems for the assessment of enterprises' performance and viability. Athens : Hellin.2. R. Thierauf : User-oriented decision support systems. Athens : Papazisi.3. I. Apostolakis & A. Kastania, 1994 : Decision making by means of SPSS/PC+. Athens : Stamoulis. |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

BUSINESS LAW

| | |
|--------------------------------|---|
| Code | 0Λ1400 |
| Type | Compulsory (C) |
| Category | SC |
| Year | C |
| Semester | F |
| Credits | 5 |
| Lecturer | |
| Objective | To train students to understand the differences of enterprises according to their legal nature, to select and apply the right partnership type when establishing or converting a corporate enterprise. |
| Prerequisites | No |
| Course contents | Object and content of the partnership law. Resources, characteristics and fundamental principles. Concept and elements of the company. Legal nature, organizing, interpretation, modification and preliminary contract of partnership. Company types. Selection of the right partnership type. Capital concentration as a tax factor in choosing the partnership type. Unlimited company. Joint venture. Simple limited company. Shares limited company. Secret company. Limited liability company. |
| Bibliography | <ol style="list-style-type: none">1. E. Skalidis, 1993 : Business Law. Athens: Sakkoulas2. V. Antonopoulos, 1997 : Business Law vol. I – Personal companies: Sakkoulas3. V. Antonopoulos, 1997 : Business Law vol. II – Capital companies. Athens: Sakkoulas |
| Hours / Week | 3 (L=3) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

OFFICE AUTOMATION

| | |
|------------------|---|
| Code | 0Λ1500 |
| Type | Compulsory (C) |
| Category | SC |
| Year | C |
| Semester | F |
| Credits | 5 |
| Lecturer | |
| Objective | To provide the students basic computer knowledge, |

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| | management and document creation, processing and presenting data in office environment. |
| Prerequisites | No |
| Course contents | Basic principles of Windows. Text processing using Microsoft Word: formation, tables, objects, reports, indexes, references. Data processing using Microsoft Excel: Data entry and formation. Functions, absolute and relative references, formats, filters, graphemes. Microsoft PowerPoint: creation of presentations, flowcharts, transition, animation, graph entry. Microsoft Access: Basic concepts, base design, creation and table relations, questions and forms. |
| Bibliography | <ol style="list-style-type: none"> 1. K.P. Anagnostopoulos: Word-Access-Excel-VBA, technologies & information management in the office. Editions Paratiritis. 2. K. Antonakopoulos, Nest. Ioannidis, Str. Kalafatoudi, Ch. Stasinou: Office Automation with the Greek Microsoft Office 2000, 1st Edition. Editions Nees Techonologies. Athens 2002. 3. G. Lagogiannis: Basic Skills in Word Processor and ComputerSheets, 2003. 4. Complete Office Handbook: The Definitive Reference for Today's Electronic Office. Susan Jaderstrom, 1996. Building Your Own High-Tech Small Office, Richardson 1998. |
| Textbooks | <ol style="list-style-type: none"> 1. Greek MS OFFICE SYSTEM 2007. Editions Kleidarithmos. Athens 2007. 2. K. Antonakopoulos, Nest. Ioannidis, Str. Kalafatoudi, Ch. Stasinou: Office Automation with the Greek Microsoft Office 2000, 1st Edition. Editions Nees Techonologies. Athens 2002. |
| Hours / Week | 4 (L=2, LW=2) |
| Teaching Methods | Lecture & Laboratory Work |
| Assessment Methods | Written Examination & Examination in the Lab |
| Language of Instruction | Greek |

INFORMATION TECHNOLOGY DIDACTICS

| | |
|-----------------|---------------|
| Code | ΠΛ1600 |
| Type | Optional (OC) |
| Category | MELA |
| Year | C |
| Semester | F |
| Credits | |

Lecturer

Objective To introduce students to the theory of knowledge and learning as well as the particularities of their application to the field of information technology. Students will be able to apply the above to the educational process as well as to the development of educational software.

Prerequisites No

Course contents Theories of learning and information technology (behaviorism, cognitive and sociocultural constructivism).
Teaching methods (methods for teaching based on collaborative group, on exploration, on interdisciplinary approach to knowledge, on work plans, etc.).
Teaching organising (teaching models, teaching goals - desired outcomes, teaching techniques, design of teaching). Assessment (goals - features, assessment tools).
Information technology in education (information technology as a cognitive object - Monitoring teaching tool - cognitive tool technocentral standard, integrated and holistic model and the educational program of informatics in Greek education - lessons - teaching materials -- school laboratories).
Topics of teaching of informatics and programming (traditional teaching approaches & approaches based on modern theories of learning).
Design, development and evaluation of educational software and educational websites.

- Bibliography**
1. . Raptis, A. Rapti: Learning and Teaching in the Era of Information, Global Approach. Volume A'. Athens 2007.
 2. A. Raptis, A. Rapti: Learning and Teaching in the Era of Information, educational activities. Volume B'. Athens 2006.
 3. V. Komis: Introduction in the Didactics of Information technology. Editions Kleidarithmos. 2004.
 4. V. Makrakis: Hypermedia in Education, A socio- Constructivism Approach. Editions Metehmio. Athens 2000.
 5. T. Mikropoulos: Educational software. Design and evaluation of hypermedia software. Editions Kleidarithmos. Athens 2000. ¶
 6. C. Solomonidou: New trends in educational
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Textbooks

- technology. Constructivism and modern learning environments. Editions Metehmio. Athens 2006.
1. A. Raptis, A. Rapti: Learning and Teaching in the Era of Information, Global Approach. Volume A'. Athens.
 2. V. Komis: Introduction in the Didactics of Information technology. Editions Kleidarithmos. 2005.

Hours / Week

2 (L=2)

Teaching Methods

Lecture

Assessment Methods

Written Examination

Language of InstructionGreek

BUSINESS PLANNING

Code

0A1700

Type

Compulsory Elective (CE)

Category

SC

Year

C

Semester

F

Credits**Lecturer****Objective**

The students' familiarization with the concept of business planning in various organizations and the private sector.

The theoretical and practical analysis of all individual characteristics that make up a business plan.

The critical presentation of several cases of business planning of organizations in Greece and abroad.

The training of the students in creating a business plan.

Prerequisites

No

Course contents

The axes of the course are: The concept and utility of business and strategic planning (introduction and definitions). Analysis of the external business environment (market, competition, socio-economic analysis) using methodologies. Analysis of internal business environment (capabilities, opportunities, resources, failures, economic data, indicators, method of franchising, business break-even analysis, methods of financing, venture capital). Options of strategies and evaluation of scenarios. Case studies and evaluation of business and investment plans.

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| Bibliography | 1. A. Tsaklaganos: Strategic Business Planning. Editions Stamoulis. Athens 1994. 2. N. Sarsentis: Business Strategy and Policy, 2nd edition, Editions Mpenou. Athens 1996. |
| Hours / Week | 2 (L=2) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

GRADUATE SEMINAR

| | |
|------------------------|---|
| Code | ΓΕ1500 |
| Type | Compulsory (C) |
| Category | SC |
| Year | D |
| Semester | G |
| Credits | 5 |
| Lecturer | |
| Objective | To familiarize students with the latest trends and developments of Applied Informatics in Management and Finance. This goal is achieved with invitations to distinguished scientists and professionals in the field of Informatics from Greece and abroad. Building a reserve of technological knowledge at a post-graduate level. |
| Prerequisites | No |
| Course contents | <p>Theory:</p> <ul style="list-style-type: none"> • The objective and utility of research • Selection of research target and questions • Research methodology presentation and analysis • Methods for carrying out research • Data collection, research analysis and design • Processing modes, synthesis and presentation of research results • Specifications for drawing up a research report. • Bibliography study- libraries <p>Exercises-practicals: Work development, in groups, studying the bibliography and cross-checking scientific and technological knowledge, written presentation and documentation, oral presentation with the use of technology. The work assigned is supervised by the teaching personnel of the department and checked before</p> |

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| | the final presentation. |
| Bibliography | <ol style="list-style-type: none"> FRAGKOS: Methodology of market research data analysis with the use of the Statistical packet SPSS for Windows. Editions Interbooks. 2004. L. Cohen, L. Manion: Methodology of Educational Research. Editions Metehmio. According to subject. John W. Creswell: Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Donald H. McBurney, Theresa L. White: Research Methods (with info Trac). Anthony M. Graziano, Michael L. Raulin: Research Methods: A Process of Inquiry with Student Tutorial CD-ROM, Fifth Edition. |
| Hours / Week | 5 (L=2, E/P=3) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Oral Examination with Presentation |
| Language of Instruction | Greek |

INFORMATION SYSTEMS SECURITY

| | |
|------------------------|--|
| Code | ΠΛ0700 |
| Type | Compulsory (C) |
| Category | SC |
| Year | D |
| Semester | G |
| Credits | 6 |
| Lecturer | |
| Objective | To offer the user the appropriate means in order to enable him to shield the information system he is responsible for, from any external factor that contrives its proper function. |
| Prerequisites | No |
| Course contents | <p>Elements of cryptography and cryptanalysis.</p> <p>Protection of the main subsystems of an information system (software, operating system, communications, etc.).</p> <p>Information security during the design phase of an information system.</p> <p>Security issues in the organization of computer centre.</p> <p>Categories of virus, ways of acting, protection from virus.</p> |

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| | Internet Security. Legal protection of citizens from the processing of personal information |
| Bibliography | <ol style="list-style-type: none"> 1. N. Alexandris, E. Kioundouzis, B. Trapezanoglou, 1995 : Information Security: Technical, Social and Economic issues. EPY. Athens. 2. R. Baskervill, 1988 : Designing Information Systems Security. J. Wiley. United Kingdom. 3. D. Gritzalis, 1991 : Computer Systems Security. EPY. Athens. |
| Textbooks | <ol style="list-style-type: none"> 1. Pomportsis and Papadimitriou: Network security. Athens 2003. 2. Katsikas, Gritzalis: Information Systems Security. Athens 2004. |
| Hours / Week | 5 (L=2, E/P=3) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

INFORMATION TECHNOLOGY PROJECT MANAGEMENT

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|------------------------|--|
| Code | ΠΛ0500 |
| Type | Compulsory (C) |
| Category | SC |
| Year | D |
| Semester | G |
| Credits | 7 |
| Lecturer | |
| Objective | The purpose of this course is make students to acquire knowledge on modern techniques and management practices and project management (project organization, project management). Using real cases (case studies), presents the main project management processes to improve the skills of students in the systematic treatment of problems occurring during setting and planning a project (project initiation and design), project staffing, project organization), time scheduling and cost management, and the project evaluation. |
| Prerequisites | No |
| Course contents | The course presents the methods and techniques used to manage and evaluate projects and programs |

(project and program management). After a brief overview of the use of systems theory in the modeling of business systems and the impact on the project management the course examines the life cycle of a project and the main planning and management processes. The alternative forms of organization for project management are examined, the conflicts and contradictions that arise during the implementation project and ways to resolve them. It presents the procedures for project planning and construction of activities that constitute the key mechanism for modeling the activities of a project. The temporal resolution of a network of activities is examined calculating the critical path, the method of CPM, and the method of PERT. The cost analysis of a project is done with the CPM-Cost technique that investigates the relationship duration / project cost and calculates the optimal combination using mathematical programming techniques. For the analysis of using alternative resources the RPS methods are used. Finally, there is a specific reference to the management of technology projects, and the information systems used for planning and project management (eg, Primavera, Artemis, etc.).

Bibliography

E. Kioundouzis: Information Technology Project Management. Editions Stamoulis. Athens 1999.

Joel Henry, Addison-Wesley: Software Project Management.

W. Royce: Software Project Management, A Unified Framework.

Maciaszek, Liong, Addison Wesley: Practical Software Engineering.

S.L.Pfleeger: Software technology: Theory and practice. Editions Kleidarithmos.

M. Hoffman, T. Beaumont: Application Development: Managing the Project Life Cycle. Midrange Computing 1997.

Neal Whitten: Managing Software Development Projects: Formula for Success. 2nd Edition, John Wiley & Sons. 1995

Textbooks

Xenos, Gotsis: Quality of software. Patras 2008.

Joseph Phillips: Information Technology project management. Editions Gkiourdass. Athens 2007.

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| Hours / Week | 5 (L=3, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

TELEMATICS APPLICATIONS IN MANAGEMENT

| | |
|-----------------|--------------------------|
| Code | ΠΛ1700 |
| Type | Compulsory Elective (CE) |
| Category | SC |
| Year | D |
| Semester | G |
| Credits | 6 |

Lecturer

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| Objective | The course is addressed in students with particular interests and knowledge in the information technology and has as aim the further familiarization with the services and the design of applications of telematics, with networks and data transmission introducing them to the latest achievements in Informatics and communications. |
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| Prerequisites | Multimedia |
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| Course contents | <p>Satellite communications, Internet over satellite. Satellite networks and TCP Protocol. GPS. Cable Data Network. Frame Relay Real time protocols and data transmission Environmental protection and Disaster Forecasting. Tele-conference Tele-work e-Europe e-government e-business e-health Telemedicine e-banking Online Learning & Technology Learning standards Virtual learning environments. Intelligent Transportation Systems (ITS). Learning management systems Telematics for people with special needs Marketing and Sales Support Systems Virtual Reality and Avatars</p> |
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| | Virtual network environments |
| Bibliography | <ol style="list-style-type: none"> 1. Gkimperitis B. Applications of Telematics and Information technology. Tziola Editions, Athens,p. 648 2. Giannaka, Kapoulas, Bouras, Tsiatsos. Virtual Network Environments, Greek Letters Editions, Athens 2005, p.152 |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

TOTAL QUALITY MANAGEMENT

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|--------------------------------|--|
| Code | OA1900 |
| Type | Compulsory Elective (CE) |
| Category | SC |
| Year | D |
| Semester | G |
| Credits | 6 |
| Lecturer | |
| Objective | To help students acquire knowledge of total quality models and apply total quality management in enterprises. |
| Prerequisites | No |
| Course contents | <p>Concept and content of total quality management. Internal and external customer. The meaning of value for the customer. Total quality targets and models. Stages of application – planning of total quality management. Manuals of quality and self-assessment.</p> <p>Quality cycles. Certification systems – quality assurance. Certification procedure and bodies. Quality cost.</p> |
| Bibliography | <ol style="list-style-type: none"> 1. Dervitsiotis : Total Quality Management. 2. Gower, Handbook of Quality Management. 3. G. Bounds, L. Yorks, M. Adams, G. Ranney, 1994 : Beyond Total Quality Management: Toward the Emerging Paradigm. McGraw Hill, College Div. |
| Hours / Week | 4 (L=2, E/P=2) |
| Teaching Methods | Lecture & Exercises / Practicals |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

PRODUCTION MANAGEMENT

| | |
|--------------------------------|---|
| Code | ΟΛ1800 |
| Type | Compulsory (C) |
| Category | SC |
| Year | D |
| Semester | G |
| Credits | 6 |
| Lecturer | |
| Objective | The purpose of this course is that students understand the organizational foundation for the rational management of production. ¶ |
| Prerequisites | No |
| Course contents | |
| Bibliography | <ol style="list-style-type: none">1. Spirakis, Sofotasios, Triantafillou: Production planning and control. Editions Gutenberg. Athens 2002.2. Pappis, Stamoulis: Production planning, 2nd Edition. Athens 2006. |
| Textbooks | <ol style="list-style-type: none">1. Spirakis, Sofotasios, Triantafillou: Production planning and control. Editions Gutenberg. Athens 2002.2. Pappis, Stamoulis: Production planning, 2nd Edition. Athens 2006. |
| Hours / Week | 3 (L=3) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

LOGISTICS

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|------------------|---|
| Code | ΠΛ1800 |
| Type | Compulsory Elective (CE) |
| Category | SC |
| Year | D |
| Semester | G |
| Credits | 6 |
| Lecturer | |
| Objective | To enable students to understand the importance of integrating supply chain operations and acquire capabilities for decision making on issues related to supplies, stocks and distribution, having as a guide the relationship quality- cost, to maintain or increase |

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| | the competitiveness of the company. |
| Prerequisites | No |
| Course contents | <p>Concept of logistics and the supply chain. Create a flexible supply chain Managing response time Cost of Logistics (costing supplies, transport and sales) Managing channels of distribution (transport systems, planning, monitoring and control of transport) Evaluation purchasing capacity and suppliers search systems Risk management Supply Chain Integration Competitive networks</p> |
| Bibliography | <ol style="list-style-type: none"> 1. R.H. Ballou: Business Logistics/Supply Chain Management. Editions Pearson Education Ltd. London, New York, 2003. 2. K. Sifniotis: Logistics Management: Theory and practice. Editions Stamouli. Athens 1997. |
| Textbooks | <ol style="list-style-type: none"> 3. M. Christopher: Logistics and supply chain management. Editions Kritiki. Athens 2007. 4. N. Papavasiliou & G. Mpalta: Distribution Network Management & Logistics. Editions Rosili. Athens 2003. |
| Hours / Week | 3 (L=3) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

SIMULATION TECHNIQUES

| | |
|------------------|---|
| Code | ΠΛ1900 |
| Type | Optional (OC) |
| Category | SC |
| Year | D |
| Semester | G |
| Credits | 2 |
| Lecturer | |
| Objective | To offer students knowledge of basic simulation |

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| | principles and techniques. |
| Prerequisites | No |
| Course contents | Development principles of models. Monte Carlo Simulation. Lifetime of a simulation study. Analyzing input and output data. Simulation Languages. Applying simulation with the use of GPSS. |
| Bibliography | 1. KHUL: Creating Computer Simulation Systems. 2. YAO: Simulated Evolution & Learning. |
| Hours / Week | 3 (L=3) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

INFORMATION RETRIEVAL

| | |
|------------------------|---|
| Code | ΠΛ2000 |
| Type | Optional (OC) |
| Category | SC |
| Year | D |
| Semester | G |
| Credits | |
| Lecturer | |
| Objective | To introduce students to the basic concepts of information retrieval, the algorithms on which it relies and the ways of its usage. |
| Prerequisites | No |
| Course contents | Introduction to information retrieval. Models of information retrieval. Qualitative and quantitative evaluation of retrieved information. Languages of questions, practices in questions and texts. Databases for indexing and searching in systems of information retrieval (inverted files, signature files, bitmaps, minimal perfect hashing functions, string searching algorithms). Surfing the internet. Digital libraries. |
| Bibliography | 1. R. Baeza-Yates, B. Ribeiro-Neto, 1999 : Modern Information Retrieval. ACM Press. 2. W. B. Frakes & Baeza-Yates, 1992 : Information Retrieval: Data Structures and Algorithms. Prentice Hall. Englewood Cliffs. NJ. USA. 3. G. Salton & M. J. McGill, 1983 : Introduction to Modern Information Retrieval. McGraw-Hill |

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| | Book Co. New York. |
| | 4. I. H. Witten, A. Moffat & T. C. Bell, 1994 : Managing Gigabytes: Compressing and Indexing Documents and Images. Van Nostrand Reinhold. New York. |
| | 5. C. J. Van Rijsbergen, 1979: Information Retrieval. Butterworths. |
| Textbooks | 1. Vazirgiannis, Xalkidi: Data Mining from databases and the Web. Editions Tipothito. Athens 2004. |
| Hours / Week | 3 (L=3) |
| Teaching Methods | Lecture |
| Assessment Methods | Written Examination |
| Language of Instruction | Greek |

PRACTICAL TRAINING

| | |
|--------------------------------|---|
| Code | |
| Type | Compulsory (C) |
| Category | |
| Year | D |
| Semester | H |
| Credits | 10 |
| Lecturer | |
| Objective | |
| Prerequisites | Successful completion of 70% of credits necessary for getting a degree (126 credits) and all specialty courses. |
| Course contents | Six-month practical training in public entities and enterprises. |
| Bibliography | |
| Recommended Reading | 35 |
| Teaching Methods | Exercises / Practicals |
| Assessment Methods | |
| Language of Instruction | Greek |

THESIS

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|--------------------------------|---|
| Type | Compulsory (C) |
| Category | |
| Year | D |
| Semester | H |
| Credits | 20 |
| Lecturer | |
| Objective | |
| Prerequisites | Successful completion of 70% of credits necessary for getting a degree (126 credits) and all specialty courses. |
| Course contents | Elaboration of a 60-page assignment based on the outcome of a study case, the study of practical problems, a bibliographic preview and composition. |
| Bibliography | |
| (Hours/Week | 15 (E/P=15) |
| Teaching Methods | Exercises / Practicals |
| Assessment Methods | Presentation |
| Language of Instruction | Greek |

FACULTY MEMBERS

Lambros Drossos, Professor

Spiros Sirmakessis, Associate Professor, Head of the Department

Theofanis Mavridakis, Associate Professor

Nicos Cosmas, Assistant Professor

Aristogianis Garbis, Assistant Professor

Giannis Tzimas, Assistant Professor

Giannis Tsaknakis, Assistant Professor

Dimitris Dovas, Professor of Applications