



BUSINESS COMPUTING



*Programme
Handbook*

2025/26

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1. WELCOME AND INTRODUCTION

WELCOME!

Dear Student,

This Handbook is intended to provide a concise reference and guide for all ACT students. Included herein are brief statements of College policies applicable to and of interest to all College constituencies.

This guide is intended to address some of the common academic and student life questions and concerns that are likely to arise during your years at ACT. Its purpose is not merely to lay out the policies of academic life, but also to point out ways of thinking about your education. Planning carefully and looking ahead will enable you to maximize your opportunities at the College. Knowing when and where to find guidance and counsel is important in ensuring that your educational choices are well-considered and make sense in the context of your larger academic goals.

We do assume, however, that you will seek out the help you need. This guide has been designed to help you do just that. Please read it, keep it, and use it as a reference throughout your academic career.

An additional channel of communication is the ACT Viewbook/Catalogue of Study (annual publication consisting of the analytical programs of study, course offerings and course descriptions) and related resources that can be found on the ACT website.

With best regards,

Dr. Stamos Karamouzis
ACT Provost

A. A BRIEF INTRODUCTION TO ACT

The American College of Thessaloniki (ACT, founded in 1981 as a two-year, Associate-degree granting institution) is the tertiary-level division of Anatolia, a private, non-profit educational institution founded in 1886. It is incorporated in, and chartered by the Commonwealth of Massachusetts, and it is fully accredited by the New England Commission of Higher Education (NECHE). In inspiration, mission, governance, and programs, ACT resembles the traditional New England colleges upon which it has been modeled.

Founded by American Protestant missionaries, Anatolia was originally located in Asia Minor and evolved from a seminary in Constantinople, which began in 1840. The school was closed during the Greek-Turkish War of 1919-1922 and ceased to have a viable mission in Asia Minor when Turkey's minority communities were uprooted under the peace treaties concluding the war. In 1924, Anatolia relocated to Thessaloniki, where the greatest part of the refugee influx from Asia Minor had settled. In the mid-1930s, the school moved to its present location on a forty-five acre campus a few miles from the center of the city.

ACT moved to a four-year college in 1989 and currently offers Bachelor's degrees in the areas of Business, Technology, English, Psychology and Politics & International Relations. Since 2002, ACT introduced graduate programs, the first one in Business (MBA) with concentrations in key disciplines such as Marketing, Management, Entrepreneurship, and Banking & Finance. In 2016, a graduate program in Hospitality & Tourism Management was introduced, followed by an Industrial/Organizational Psychology one in 2020. All graduate programs are designed to accommodate graduates from all disciplines and can be completed on full-time or part-time basis within one or two years. In September 2013, ACT entered a new validation agreement for all its undergraduate programs with one of the top British Universities, the British Open University.

In recent years, ACT has received grants from a number of foundations, notably among which are the Anagnos Foundation, the Andrew Mellon Foundation, the Cleveland H. Dodge Foundation, the N. Demos Foundation, the Minneapolis Foundation, the Pappas Foundation, (US), the J. F. Costopoulos Foundation, and the Stavros S. Niarchos Foundation (Greece). These grants, contributions by many individual donors in Greece and in the US, and most particularly the extraordinary contributions of Mr. George Bissell, Chair of the Board of Trustees, have made possible the creation of a world-class campus and of the Bissell Library, a state of the art facility unique in SE Europe.

2. LIST OF PROGRAMME DIRECTOR AND ACADEMIC STAFF (www.act.edu/academics/faculty)

CHAIR

Dr. Vagelis Chatzistavros

Assistant Professor (Computer Science)(Reg)
Dipl,Electrical and Computers Engineering, Democritus University of Thrace;
MSc, Communication Network, Democritus University of Thrace;
PhD, Electrical and Computers Engineering, Democritus University of Thrace

ACADEMIC STAFF

Dr. Astaras, Alexandros

Assistant Professor (Computer Science) (Reg)
B.A. in Physics, Oberlin College, Oberlin, USA;
PhD in Electronics Engineering, The University of Edinburgh, Edinburgh, Scotland, UK

Dr. Baglavas, Grigoris

Assistant Professor (Computer Science)(Reg)
BSc, Mathematics, Aristotle University of Thessaloniki;
MSc, Telematics, University of Sheffield;
PhD, Computer Science, University of Macedonia

Mr. Christodoulou, Christos

Adjunct Instructor (Computer Science)(Adj)
BSc., Physics, Aristotle University of Thessaloniki, Greece;
MSc., Information Technology, University of Aston in Birmingham, Birmingham, U.K.

Dr. Vasilios Daskalogiannis

Assistant Professor (Mathematics) (Reg)
BS, Mathematics, Aristotle University of Thessaloniki, Greece; MSc in Pure Mathematics, Aristotle University of Thessaloniki, Greece; PhD, Mathematics, Department of Mathematics of the Aristotle University of Thessaloniki

Dr. Konstantinos Kanakoglou

Assistant Professor (Mathematics) (Reg)
B.Sc. in Physics, Aristotle University of Thessaloniki, Greece; M.Sc. in Pure Mathematics, Aristotle University of Thessaloniki, Greece; Ph.D. in Mathematical Physics, Aristotle University of Thessaloniki, Greece

Mr. Kaplanoglou, Pantelis

Adjunct Instructor (Computer Science)(Adj)
BSc., Software Engineering, A.T.E.I. of Thessaloniki, Greece;
MSc., Web Intelligence, A.T.E.T. of Thessaloniki, Greece;
Ph.D Candidate, Machine Learning for Computer Vision, Aristotle University of Thessaloniki, Greece.

Mr. Karamichalis, Menelaos

Adjunct Instructor (Computer Science)(Adj)
BA, Physics, Berea college, Berea, KY, USA;
B.Sc. in Electrical Engineering, Washington University, St. Louis, MO, USA;
MSc. in Electrical Engineering, Washington University, st. Louis, MO, USA;
Master of Engineering Management, Washington University, St. Louis, Mo, USA

Mr. Kourakis, Orestis

Adjunct Instructor (Digital Photography)(Adj)

BSc., School of Agriculture, Aristotle University of Thessaloniki, Greece;

MA in Photography, Savanna College of Art and Design, U.S.A.

Dr. Mengoudi, Kyriaki

Assistant Professor (Computer Science)(Reg)

BSc, Mathematics, Aristotle University of Thessaloniki;

MSc., Applied Statistics and Data Mining, University of St Andrews, Scotland, UK;

Ph.D.,Computer Science, University College

London, UK

Mr. Morris, Brian

Adjunct Instructor (Computer Science)(Adj)

BSc., Computer Processing, Illinois Central College, U.S.A.;

BFA, The School of the Art Institute of Chicago, U.S.A.;

MA, Digital Arts, University of Arts London at Camberwell, London, UK.

Mr. Victoratos, Iosif

Adjunct Professor (Computer Science)(Adg)

BS.,MSC., Computer Engineering and Informatics, University of Patras, Greece;

MSc., Informatics and Management, Aristotle University of Thessaloniki, Greece;

Ph.D.,Semantic Web Technologies, Aristotle University of Thessaloniki, Greece.

3. LIST OF SUPPORT STAFF

ADMINISTRATIVE OFFICES

Office/Division	Name	Location	Phone No. (2310+No.)	e-mail (name@act.edu)
President	Dr. Panayiotis Vlachos	Stephens Hall, 1 st Floor	398204	pvla
Executive Assistant to the President	Ms. Elena Charalambides	Stephens Hall, 1 st Floor	398204	elenacha
Vice-President for Operations & Planning	Mr. Ioannis Tsorbatzoglou	Stephens Hall, 1 st Floor	398326	yatso
Vice President for Institutional Advancement	Mr. Peter Chresanthakes	Stephens Hall, 1 st Floor	398265	peter
Vice President for Finances & HR/CFO	Mr. Pavlos Floros	Stephens Hall, 1 st Floor	398214	pfloros
Assistant Accountant	Ms. Eva Montiadou	Stephens Hall, Ground Floor	398219	emont
Alumni and Public Relations Officer	Ms. Marina Charitopoulou	Stephens Hall, 2 nd Floor	398220	mcharito
Director of Marketing	Mr. Theodore Papanestoros	Stephens Hall, 1 st Floor	398385	theodore
Director of International Programs	Ms. Heather Funk	Constantinidis Hall, 1st Floor	398215	heather
International Programs and Student Services Coordinator	Ms. Maria Maleas	Constantinidis Hall, 1st Floor	398205	mamalea

Director of Admissions	Ms. Roula Lebetli	Bissell Library, 1 st Floor	398239	admissions
Supervisor of the Registrar's Office	Ms. Christina Moma	Constantinidis Hall, 1st Floor	398207	actreg
Senior Officer at the Registrar's Office	Ms. Theodora Zafiriou	Constantinidis Hall, 1st Floor	398224	actreg
Business Liaison & Career Services Officer	Mr. Dimitris Chatzigeorgiou	Bissell Library, Ground Floor	398337	ddiamantis
Assistant Administrative Officer	Mr. Vassilis Loukidis	Constantinidis Hall, 1st Floor	398216	vloukid

4. NAME, POSITION AND INSTITUTION OF THE EXTERNAL EXAMINER(S) INVOLVED IN THE PROGRAMME

- Dr. Tsompanas Antisthenis, University of the West of England
- Dr. Paul Neve, Kingston University

5. INTRODUCTION TO THE PROGRAMME

The degree in Business Computing is a hybrid program that provides an excellent blend of Business knowledge and computing technologies. The program focuses on fundamental areas of Business (Management, Marketing, Accounting, Finance and Economics) and covers a breadth of Information Technologies (electronic office, programming, databases, multimedia, networking and the web). Graduates of the program will have the skills and training needed to understand Business functions, to analyse business-user information needs and to design and implement information systems.

The B.Sc. in Business Computing prepares the student for a career either in the field of Computer Science and its applications in the field of Business. The program develops broadly educated and competent graduates ready to pursue professional careers or graduate studies in either Business or Computer Science.

The program plays an emphasis on technology-based teaching. A Learning Management System (LMS) is used in a number of modules as communication, coordination and dissemination tools.

Training in research methods and a final year capstone project provide the theoretical and practical framework for successful performance of program graduates in industry or academia.

The program serves the following fundamental aims:

- To provide knowledge and the cognitive foundation expected of a graduate of higher education entering the industry or continuing in academia.
- To provide work opportunities in the fields of Business Studies and/or Computer Science by combining academic theory, practical implementation of skills and exposure to Information Technology.
- To develop knowledge, understanding, problem solving skills and where possible experience in the field of Business Studies with emphasis in the application of Information Technology.
- To provide exposure, training and experience in major fields of computing especially pertaining to the office and enterprise: electronic office, programming, databases, multimedia, networking and the Web.
- To develop appreciation, assessment, analysis, design, usage and programming skills applied to enterprise problem solving through Information Technology.
- To produce reflective, market-aware members of contemporary society through exposure to multiple disciplines, their interrelationship and a wider breadth of learning
- To instill lifelong values, ethos and responsibility surrounding professional practice.

The B.Sc. in Business and Computing was launched in September 1999 following internal proposals and research during 1997-1999 based on the main rationales that 1) a degree in computing was increasingly popular and 2) often CS graduates did not possess enough business knowledge. This hybrid programme offers graduates increased competitiveness in the market. The programme changed to exclusively Computer Science in 2004 and was later re-introduced as Business Computing in 2010. It was validated by Open University, UK. in 2013 and revalidated in the Spring of 2018.

In order to receive the BSc degree, the student must have fulfilled all the GER and major requirements and have completed at least 121 US credit hours with an overall G.P.A of 2.0 or better. All business computing students take a two-semester sequence Senior Thesis I and II course. According to NEASC Standards, students must complete at least one fourth of their undergraduate program, including advanced work in the major or concentration, at the institution awarding the degree. As a consequence, all candidates for an ACT degree must have been in residence at the College during the last two semesters of full time instruction, assuming availability and equivalency of transferable courses.

6. PROGRAMME SPECIFICATION

The mission of the Division of Technology & Science is to offer innovative, leading edge technology programs in computing and academically sound service courses in the areas of Mathematics, Statistics and Science. As computing is a rapidly evolving discipline we continuously adapt our curriculum and facilities to meet the changing demands of the computing profession.

The computing programs target:

- Students that are interested primarily in computing and Business with an emphasis in Information Systems
- Students or professionals that are interested to specialize in certain areas in computing. In particular the certificate and special programs provide training opportunities for the wider community.

Courses in the Division are designed to broaden students' perspectives on the role of computing, mathematics, statistics and science in the modern world, while equipping them with both computer literacy and quantitative skills. A broad range of computing courses is offered, the majority having a strong laboratory component with emphasis on application.

ACT Degree Competitive Advantage

Areas An ACT graduate with the BSc (Hons) in Business Computing will have obtained a theoretical and practical adequacy in the field of IT application and design, a sound business domain knowledge and directly marketable skills through the ability to further obtain certifications popular technologies (CCNA, ORACLE).

- Programming
- Databases
- Networking
- Information's Systems Analysis
- Business Processes

Special Features

The programs do not concentrate only on the latest technologies, which at some point will become outdated, but provide students with excellent critical skills and systematic thinking that will allow them to become lifelong learners and succeed in a wide variety of technical and managerial positions. Students are prepared for a successful career in the field of computing and its applications and/or additional study in computing or Business at the graduate level.

Computing and Teaching Facilities

The Division maintains the following facilities available to be used by its students:

- **Four teaching computer labs**, annually upgraded in terms of Hardware infrastructure and Software packages (updated versions and licences).
 - **Lab 4:** General purpose computer lab used for computing module instruction (25 stations in total: 24 student workstations, 1 instructor station);
 - **Lab 5:** Electronics and Robotics student/faculty research lab with 21 workstations (20 student workstations, 1 instructor station), a classroom set of 11 Lego EV3 robots, a classroom set of 11 Arduino kits, electronics equipment (Function Generators, Oscilloscopes, Power Supplies, multimeters) and hand tools;
 - **Lab 6:** Lab appropriately designed to fulfil the requirements of multimedia and other computing modules (25 stations in total: 24 student workstations, 1 instructor station);

- **Lab 7:** General purpose computer lab, used for computing modules' instruction and Bibliographic instruction (25 stations in total: 24 student workstations, 1 instructor station).
- **Cloud computing server infrastructure** is in place and ACT.
- A **CISCO lab:** physical lab with programmable routers/switches and PCs for the instruction of networking modules.
- **Programmable devices** are available to students for their own experimentation and practice, such as a quad copter, Microsoft Kinect camera system, programmable android based watches. The Division can apply for small equipment grants (approx. 1000 € each) to purchase such devices as per the students' and faculty requests in the context of IT-related projects. There is also an annual budget of approximately 2,000 € that can and is used for such purchases.

PROGRAMME OF STUDY AND INTENDED LEARNING OUTCOMES

Programme Structure - LEVEL 4

Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
CSC 105 - Structured Programming	15	Economics 101 - Introductory Economics	15		
CSC 106 - Object Oriented Programming	15	Marketing 101 - Introduction to Marketing	15		
CSC 205 - Business Data Management	15	Accounting 101 - Financial Accounting	15		
CSC 215 - Data Structures	15	Management 101 - Introduction to Management	15		
MATH 115 - Business Calculus	15				
STAT 210 - Statistics with R	15				

Intended learning outcomes at Level 4 are listed below:

Learning Outcomes - LEVEL 4

3A. Knowledge and understanding

Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>A. Knowledge and understanding – On completion of this level you will have:</p> <p>1) an understanding of some fundamental principles, concepts and techniques underlying Business Computing;</p>	<p>Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material.</p> <p>Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.</p>

Learning Outcomes – LEVEL 4

3A. Knowledge and understanding

2) an awareness of the range of models and languages to support the analysis and design of Business Computing systems;

3) an awareness of the range of situations in which Business Computing systems are used and the ways in which people interact with them;

4) an awareness of the ethical, social and legal issues that can be associated with the deployment of Business Computing systems;

5) an awareness of major trends in Business Computing and of the implications of these trends.

6) an awareness of Business Processes and be able to demonstrate understanding in the areas of: Accounting, Finance, Management and Marketing

Tools to be used to achieve this will include some or all from the following:

- printed and online teaching texts
- directed readings from textbooks and papers
- Specialised software tools.

Support of learning:

Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.

Tools to be used to achieve this will include some or all from the following:

- self-assessment questions and exercises, included in the teaching texts
- programming tasks, computer-based investigations and open-ended project work
- feedback and guidance from an instructor; tutorials, revisions and in-class activities
- e-mail and individual instructor-learner conferences
- Study and project guides.

Assessment of learning:

An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.

Tools to be used to achieve this will include some or all from the following:

- Instructor-Marked summative formal examinations
- Instructor-Marked summative projects
- Instructor-Marked summative presentations
- Instructor-Marked formative assignments/assessment

Learning Outcomes – LEVEL 4

3A. Knowledge and understanding

Instructor-Marked formative projects

3B. Cognitive skills

Learning outcomes:

B. Cognitive skills – On completion of this **level** you will be able to:

- 1) apply key concepts from Business Computing in specified contexts;
- 2) apply appropriate techniques and tools for, problem-solving, designing and testing Business Computing systems;
- 3) carry out a project in Business Computing that applies and extends your knowledge and understanding;

Learning and teaching strategy/ assessment methods

Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material.

Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.

Tools to be used to achieve this will include some or all from the following:

- printed and online teaching texts
- directed readings from textbooks and papers
- Specialised software tools.

Support of learning:

Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.

Tools to be used to achieve this will include some or all from the following:

- self-assessment questions and exercises, included in the teaching texts

3B. Cognitive skills

- programming tasks, computer-based investigations and open-ended project work
- feedback and guidance from an instructor; tutorials, revisions and in-class activities
- e-mail and individual instructor-learner conferences
- Study and project guides.

Assessment of learning:

An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.

Tools to be used to achieve this will include some or all from the following:

- Instructor-Marked summative formal examinations
- Instructor-Marked summative projects
- Instructor-Marked summative presentations
- Instructor-Marked formative assignments/assessment

Instructor-Marked formative projects

3C. Practical and professional skills

Learning outcomes:

Learning and teaching strategy/ assessment methods

C. **Key skills** – On completion of this **level** you will be able to:

- 1) communicate information, arguments ideas and issues clearly and in appropriate ways;
- 2) work in a group, communicating effectively in a distance setting where the communication is computer-mediated;

Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material.

Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.

Tools to be used to achieve this will include some or all from the following:

- printed and online teaching texts

3C. Practical and professional skills

3) work independently, planning, monitoring, reflecting on and improving your own learning;

4) find information from a variety of sources, using information technology where necessary;

5) use appropriate numerical techniques to solve problems.

6) apply suitable techniques to solve simple Business Computing problems.

- directed readings from textbooks and papers
- Specialised software tools.

Support of learning:

Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.

Tools to be used to achieve this will include some or all from the following:

- self-assessment questions and exercises, included in the teaching texts
- programming tasks, computer-based investigations and open-ended project work
- feedback and guidance from an instructor; tutorials, revisions and in-class activities
- e-mail and individual instructor-learner conferences
- Study and project guides.

Assessment of learning:

An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.

Tools to be used to achieve this will include some or all from the following:

- Instructor-Marked summative formal examinations
- Instructor-Marked summative projects
- Instructor-Marked summative presentations
- Instructor-Marked formative assignments/assessment
- Instructor-Marked formative projects

3D. Key/transerable skills

Learning outcomes:

D. Practical and/or professional skills – On completion of this **level** you will be able to:

- 1) develop and test technology simple Business Computing systems;
- 2) plan and organise yourself and your work appropriately;
- 3) undertake on-going learning in order to keep up to date with Business Computing;
- 4) identify the ethical, social and legal issues that may arise during the development and use of Business Computing systems;
- 5) use appropriate professional ICT tools, as appropriate, to help you learn effectively.

Learning and teaching strategy/ assessment methods

Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material.

Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.

Tools to be used to achieve this will include some or all from the following:

- printed and online teaching texts
- directed readings from textbooks and papers
- Specialised software tools.

Support of learning:

Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.

Tools to be used to achieve this will include some or all from the following:

- self-assessment questions and exercises, included in the teaching texts
- programming tasks, computer-based investigations and open-ended project work
- feedback and guidance from an instructor; tutorials, revisions and in-class activities
- e-mail and individual instructor-learner conferences
- Study and project guides.

Assessment of learning:

An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.

Tools to be used to achieve this will include some or all from the following:

3D. Key/transferable skills

- Instructor-Marked summative formal examinations
- Instructor-Marked summative projects
- Instructor-Marked summative presentations
- Instructor-Marked formative assignments/assessment
- Instructor-Marked formative projects

If the learning outcomes have been met, then the student is entitled to receive a [Certificate of Higher Education in Business Computing](#) (120 credits at Level 4)

Programme Structure - LEVEL 5

Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable ?	Semester runs in
CSC 206 - Web Development	15				
CSC 306 - Advanced Web Development	15				
CSC 312 - Database Management Systems	15				
CSC 340 - Artificial Intelligence	15				
CSC 450 - System Analysis and Design	15				
FIN 201 - Financial Management	15				
MAN 201 - Organisational Behaviour	15				
RES 299 - Research Methods	15				

Learning Outcomes – LEVEL 5

3A. Knowledge and understanding

Learning outcomes:

- A. **Knowledge and understanding** – On completion of this **level** you will have:
- 1) a knowledge and understanding of relevant principles and concepts underlying Business Computing;
 - 2) an ability to apply correctly common techniques for the design and development of Business Computing systems;
 - 3) an awareness of the range of situations in which Business Computing systems are used and the ways in which people interact with them;
 - 4) an appreciation of the ethical, social and legal issues that can be associated with the deployment of Business Computing systems;
 - 5) an awareness of major trends in Business Computing and of the implications of these trends;
 - 6) the ability analyse Business Processes and be able to apply understanding in the areas of: Accounting, Finance, Management and Marketing.

Learning and teaching strategy/ assessment methods

Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material.

Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.

Tools to be used to achieve this will include some or all from the following:

- printed and online teaching texts
- directed readings from textbooks and papers
- Specialised software tools.

Support of learning:

Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.

Tools to be used to achieve this will include some or all from the following:

- self-assessment questions and exercises, included in the teaching texts
- programming tasks, computer-based investigations and open-ended project work
- feedback and guidance from an instructor; tutorials, revisions and in-class activities
- e-mail and individual instructor-learner conferences
- Study and project guides.

Assessment of learning:

An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.

Tools to be used to achieve this will include some or all from the following:

- Instructor-Marked summative formal examinations
- Instructor-Marked summative projects
- Instructor-Marked summative presentations
- Instructor-Marked formative assignments/assessment

Instructor-Marked formative projects

3B. Cognitive skills

Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>B. Cognitive skills – On completion of this level you will be able to:</p> <ol style="list-style-type: none"> 1) apply correctly key Business Computing concepts in a range of contexts; 2) apply appropriate techniques and tools for abstracting, modelling, problem-solving, designing and testing Business Computing systems; 3) compare and contrast, specifications and implementations of Business Computing systems and simple hardware systems; 4) reflect on what you achieve in your studies, and how you might improve your performance. 5) understand the fundamental commercial and economic concepts and managerial techniques throughout the lifecycle of an information system 	<p>Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material. Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● printed and online teaching texts ● directed readings from textbooks and papers ● Specialised software tools. <p>Support of learning: Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● self-assessment questions and exercises, included in the teaching texts ● programming tasks, computer-based investigations and open-ended project work ● feedback and guidance from an instructor; tutorials, revisions and in-class activities ● e-mail and individual instructor-learner conferences ● Study and project guides. <p>Assessment of learning: An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● Instructor-Marked summative formal examinations ● Instructor-Marked summative projects ● Instructor-Marked summative presentations ● Instructor-Marked formative assignments/assessment <p>Instructor-Marked formative projects</p>

3C. Practical and professional skills

Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>C. Key skills – On completion of this level you will be able to:</p> <ol style="list-style-type: none"> 1) communicate information, arguments and ideas effectively, using the styles and language appropriate to your subject, purpose and audience; 2) work in a group, communicating effectively in a distance setting where the communication is computer-mediated; 3) work independently, planning, monitoring and reviewing your own learning; 4) find, assess and use information from a variety of sources, using information technology where necessary; 5) use appropriate numerical and analytical techniques to solve problems; 6) understand a range of technological problems and apply suitable techniques for solving them. 	<p>Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material. Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● printed and online teaching texts ● directed readings from textbooks and papers ● Specialised software tools. <p>Support of learning: Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● self-assessment questions and exercises, included in the teaching texts ● programming tasks, computer-based investigations and open-ended project work ● feedback and guidance from an instructor; tutorials, revisions and in-class activities ● e-mail and individual instructor-learner conferences ● Study and project guides. <p>Assessment of learning: An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● Instructor-Marked summative formal examinations ● Instructor-Marked summative projects ● Instructor-Marked summative presentations ● Instructor-Marked formative assignments/assessment <p>Instructor-Marked formative projects</p>

3D. Key/transerable skills

Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>D. Practical and/or professional skills – On completion of this level you will be able to:</p> <ol style="list-style-type: none"> 1) analyse, design, evaluate and/or test Business Computing systems; 2) recognise and record your skills and knowledge to support your personal and/or your career goals; 3) demonstrate the ability to undertake ongoing learning in order to keep up to date with Business Computing; 4) identify and explain the ethical, social and legal issues that may arise during the development and use of Business Computing systems; 5) use appropriate professional ICT tools to help you learn effectively. 6) work as a member of a team consisting of members with distinctive roles 	<p>Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material. Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● printed and online teaching texts ● directed readings from textbooks and papers ● Specialised software tools. <p>Support of learning: Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● self-assessment questions and exercises, included in the teaching texts ● programming tasks, computer-based investigations and open-ended project work ● feedback and guidance from an instructor; tutorials, revisions and in-class activities ● e-mail and individual instructor-learner conferences ● Study and project guides. <p>Assessment of learning: An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● Instructor-Marked summative formal examinations ● Instructor-Marked summative projects ● Instructor-Marked summative presentations ● Instructor-Marked formative assignments/assessment <p>Instructor-Marked formative projects</p>

If the learning outcomes have been met, then the student is entitled to receive a [Diploma of Higher Education in Business Computing/ 240 credits \(120 at Level 4, 120 at Level 5\)](#)

Programme Structure - LEVEL 6

Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable ?	Semester runs in
CSC 322 - Computer Networks	15	CSC 219 - Video Game Design	15		
CSC 325 - Distributed Applications	15	CSC 321 - Operating Systems	15		
CSC 443 - Thesis I	15	CSC 330 - Mobile Robotics	15		
CSC 444 - Thesis II	15	CSC 333 - Computer Networks II	15		
MAN 312 - Operations Management	15	CSC 412 - Object Oriented Design Patterns	15		
		CSC 421 - Computer Systems Security	15		
		CSC 422 - Advanced DBMS	15		
		ECON 332 - International Economics	15		
		FIN 220 - Investment and Portfolio Management	15		
		MKTG 301 - Entrepreneurial and Corporate Market	15		
		MKTG 303 - Tourism e-business	15		
		MKTG 318 - Global Marketing	15		
		MKTG 320 - Marketing Research	15		
		MKTG 324 - e-Marketing	15		
		MKTG 330 - Consumer Behaviour	15		
		MAN 302 - Revenue Management	15		

Programme Structure - LEVEL 6

		MAN 303 - Events Management	15		
		MAN 305 - HR in Hotel and Tourism	15		
		MAN 341 - Business in Greece and the EU	15		
		PRACTICUM 300 - Practicum	15		

Intended learning outcomes at Level 6 are listed below:

Learning Outcomes - LEVEL 6

3A. Knowledge and understanding

Learning outcomes:	Learning and teaching strategy/ assessment methods
<p>A. Knowledge and understanding – On completion of this level you will have:</p> <ol style="list-style-type: none"> 1) a broad critical understanding of the fundamental principles, concepts and techniques underlying Business Computing; 2) an understanding of a range of models and languages to support the analysis and design of Business Computing systems; 3) an understanding of the range of situations in which Business Computing systems are used, the ways in which people interact with them, and the possibilities and limitations of such systems; 4) a critical awareness of the ethical, social and legal issues that can be associated with the development and deployment of Business Computing systems; 5) an awareness of major trends in Business Computing and of the implications of these trends. 6) a critical understanding of Business Processes and be able to demonstrate understanding in a broad set of: Accounting, Finance, Management and Marketing areas 	<p>Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material. Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● printed and online teaching texts ● directed readings from textbooks and papers ● Specialised software tools. <p>Support of learning:</p> <p>Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.</p> <p>Tools to be used to achieve this will include some or all from the following:</p> <ul style="list-style-type: none"> ● self-assessment questions and exercises, included in the teaching texts ● programming tasks, computer-based investigations and open-ended project work ● feedback and guidance from an instructor; tutorials, revisions and in-class activities

Learning Outcomes – LEVEL 6

3A. Knowledge and understanding

- e-mail and individual instructor-learner conferences
- Study and project guides.

Assessment of learning:

An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.

Tools to be used to achieve this will include some or all from the following:

- Instructor-Marked summative formal examinations
- Instructor-Marked summative projects
- Instructor-Marked summative presentations
- Instructor-Marked formative assignments/assessment

Instructor-Marked formative projects

3B. Cognitive skills

Learning outcomes:

B. Cognitive skills – On completion of this **level** you will be able to:

- 1) apply and critically evaluate key Business Computing concepts in a range of contexts;
- 2) select and apply appropriate techniques and tools for abstracting, modelling, problem-solving, designing and testing Business Computing systems, and be aware of the limitations involved;
- 3) compare, contrast, critically analyse and refine specifications and implementations of Business systems and simple hardware systems;
- 4) devise and carry out a project in Business Computing that applies and extends your knowledge and understanding, and critically reflect on the processes involved and the outcomes of your work.
- 5) demonstrate competence in the choice and use of complex and specialised material for advanced writing on a final empirical project
- 6) understand advanced commercial and economic concepts and managerial techniques throughout the lifecycle of an information system

Learning and teaching strategy/ assessment methods

Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material.

Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.

Tools to be used to achieve this will include some or all from the following:

- printed and online teaching texts
- directed readings from textbooks and papers
- Specialised software tools.

Support of learning:

Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.

Tools to be used to achieve this will include some or all from the following:

- self-assessment questions and exercises, included in the teaching texts
- programming tasks, computer-based investigations and open-ended project work
- feedback and guidance from an instructor; tutorials, revisions and in-class activities
- e-mail and individual instructor-learner conferences
- Study and project guides.

3B. Cognitive skills

7) identify and assess possible security issues throughout the lifecycle of an information system

Assessment of learning:

An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.

Tools to be used to achieve this will include some or all from the following:

- Instructor-Marked summative formal examinations
- Instructor-Marked summative projects
- Instructor-Marked summative presentations
- Instructor-Marked formative assignments/assessment

Instructor-Marked formative projects

3C. Practical and professional skills

Learning outcomes:

C. **Key skills** – On completion of this **level** you will be able to:

- 1) communicate information, arguments, ideas and issues clearly and in appropriate ways, bearing in mind the audience for and the purpose of your communication;
- 2) work in a group, communicating effectively both using digital communication and in face-to-face contexts;
- 3) work independently, planning, monitoring, reflecting on and improving your own learning;
- 4) find, assess and apply information from a variety of sources, using information technology where necessary;
- 5) select and use accurately, appropriate numerical and analytical techniques to solve problems;
- 6) recognise and understand a range of technological problems and select suitable techniques for solving them.
- 7) demonstrate the ability to carry out an empirical study involving various methods of data collection (experiments, observation, questionnaires, interviews etc.), set-up a major project and write an argument

Learning and teaching strategy/ assessment methods

Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material.

Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.

Tools to be used to achieve this will include some or all from the following:

- printed and online teaching texts
- directed readings from textbooks and papers
- Specialised software tools.

Support of learning:

Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.

Tools to be used to achieve this will include some or all from the following:

- self-assessment questions and exercises, included in the teaching texts
- programming tasks, computer-based investigations and open-ended project work
- feedback and guidance from an instructor; tutorials, revisions and in-class activities
- e-mail and individual instructor-learner conferences
- Study and project guides.

Assessment of learning:

An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.

Tools to be used to achieve this will include some or all from the following:

3C. Practical and professional skills

- Instructor-Marked summative formal examinations
 - Instructor-Marked summative projects
 - Instructor-Marked summative presentations
 - Instructor-Marked formative assignments/assessment
- Instructor-Marked formative projects

3D. Key/transferrable skills

Learning outcomes:

- D. Practical and/or professional skills** – On completion of this **level** you will be able to:
- 1) analyse, design, evaluate and/or test Business Computing systems, using appropriate simulation and modelling tools where appropriate;
 - 2) plan and organise yourself and your work appropriately, including keeping systematic records of work in progress and outcomes;
 - 3) demonstrate the ability to undertake on-going learning in order to keep up to date with Business Computing;
 - 4) identify and address the ethical, social and legal issues that may arise during the development and use of Business Computing systems;
 - 5) use appropriate professional ICT tools to support your work.
 - 6) **work as a member of a team consisting of members with distinctive roles**

Learning and teaching strategy/ assessment methods

Guided teaching environment (Lectures & labs) is the principal method of delivery for the concepts, principles and skills involved in the outcomes. Students are also directed to reading from textbooks, academic papers and other relevant material. Understanding is reinforced by means of exercise classes, discussion groups, laboratories, assignments and project work.

Tools to be used to achieve this will include some or all from the following:

- printed and online teaching texts
- directed readings from textbooks and papers
- Specialised software tools.

Support of learning:

Learning is supported outside the classroom with the use of the learning management system Moodle, instructor office hours, sample answers to assessment and extra lectures as seen appropriate by the instructor.

Tools to be used to achieve this will include some or all from the following:

- self-assessment questions and exercises, included in the teaching texts
- programming tasks, computer-based investigations and open-ended project work
- feedback and guidance from an instructor; tutorials, revisions and in-class activities
- e-mail and individual instructor-learner conferences
- Study and project guides.

Assessment of learning:

An assessment of the understanding of underlying concepts and principles forms part of the overall assessment of final exams/projects submitted/taken.

Tools to be used to achieve this will include some or all from the following:

- Instructor-Marked summative formal examinations
- Instructor-Marked summative projects
- Instructor-Marked summative presentations
- Instructor-Marked formative assignments/assessment

3D. Key/transferable skills	
	Instructor-Marked formative projects

If the learning outcomes have been met, then the student is entitled to receive a **BS Ordinary in Business Computing**/300 credits (120 at Level 4, 120 at Level 5, and at least 60 at Level 6, but not including **Computer Science 444 – Thesis II**)

Or

Transfer to BS (Hons) Business Computing (subject to validation) and receive a **BS (Hons) Business Computing**/360 Credits (120 at Level 4, 120 at Level 5, 120 at Level 6)

SUGGESTED PROGRAM OF STUDIES

Year 1					
Fall	Grade	Spring I	Grade	Spring II	Grade
CSC105 - Structured Programming		CCS106 - Object Oriented Programming		Business Elective #1 (MNGT 101)	
ACT Module CSC 180/MATH 101		MATH 115 - Business Calculus I		ACT Module (GER 5) ENG 204	
ACT Module (GER 1) ENG 101		ACT Module (GER 3) ENG 102			
ACT Module (GER 2) POL 101		ACT Module (GER 4) PHIL 101			
Year 2					
Fall	Grade	Spring I	Grade	Spring II	Grade
CSC 205 - Business Data Management		STAT210 - Introductory Statistics with R		CSC450 - System Analysis & Design	
CSC215 - Data Structures & Algorithms		CSC312 - Database Management Systems		CSC340 - Artificial Intelligence	
Business Elective #2 (ACC 101)		Business Elective #3 (ECON 101)			
ACT Module (GER 6) PHIL 203		ACT Module ACC 102			
Year 3					
Fall	Grade	Spring I	Grade	Spring II	Grade
CSC206 - Web Development		CSC306 Advanced Web Development		CSC325 - Distributed Applications	
FIN 201 - Financial Management		RES 299 - Research Methods		ACT Module Any CS or BUS module - CSC 191	
MAN 201 - Organisational Behaviour		ACT Module (GER 8) SNCE 110			
ACT Module (GER 7) ART 120		ACT Module (GER 9) PSY 101			
Year 4					
Fall	Grade	Spring I	Grade	Spring II	Grade
CSC443 - Thesis I		Major Elective #2		MAN 312 - Operations Management	
CSC322 - Computer Networks I		CSC444 - Thesis II		ACT Module (GER 10) HIS 120	
Major Elective #1		Major Elective #3			
ACT Module BUS 240		ACT Module Free Elective - CSC 360			

Major Electives List

Computing

- CSC 219 - Video Game Design
- CSC 321 - Operating Systems
- CSC 330 - Mobile Robotics
- CSC 333 - Computer Networks II
- CSC 340 - Artificial Intelligence
- CSC 412 - Object Oriented Design Patterns
- CSS 421 - Computer Systems Security
- CSC 422 - Advanced DBMS

Business

- ECON 332 - International Economics
- FIN 220 - Investment and Portfolio Management
- MKTG 301 - Entrepreneurial and Corporate Marketing Strategy
- MKTG 303 - Tourism e-business
- MKTG 318 - Global Marketing
- MKTG 320 - Marketing Research
- MKTG 330 - Consumer Behavior
- MKTG 324 - E-Marketing
- MAN 302 - Revenue Management
- MAN 303 - Events Management
- MAN 305 - HR in Hotel and Tourism
- MAN 341 - Business in Greece and the EU

GER

ENG 101 - English I

ENG 102 - English II

ENG 204 - Business English

PHIL 101 - Philosophy

PHIL 203- Ethics
POL 101 -Politics
HIS 120 - History
SOC/PSY/ANTH 101- Social Science
Natural Science
ART/ENG/MUS 120, Art or Literature



Level	Study module/unit	A 1	A 2	A 3	A 4	A 5	A 6			B 1	B 2	B 3	B 4	B 5			C 1	C 2	C 3	C 4	C 5	C 6			D 1	D 2	D 3	D 4	D 5	D 6	
5	CSC 206 - Web Development	✓	✓	✓		✓				✓	✓	✓					✓		✓			✓			✓		✓				
	CSC 306 - Advanced Web Development	✓	✓	✓		✓				✓	✓	✓					✓		✓			✓			✓		✓				
	CSC 312 - Database Management Systems	✓	✓	✓		✓				✓	✓	✓					✓		✓			✓			✓						
	CSC 340 - Artificial Intelligence	✓	✓	✓		✓				✓	✓	✓					✓		✓	✓	✓	✓	✓		✓						
	CSC 450 - System Analysis and Design	✓	✓	✓	✓	✓				✓	✓	✓							✓	✓			✓		✓				✓		
	FIN 201 - Financial Management						✓				✓												✓	✓							
	MAN 201 - Organisational Behaviour						✓	✓					✓	✓					✓	✓											
	RES 299 - Research Methods						✓						✓	✓				✓	✓	✓	✓	✓	✓				✓	✓			

Level	Study module/unit	A 1	A 2	A 3	A 4	A 5	A 6			B 1	B 2	B 3	B 4	B 5	B 6	B 7	C 1	C 2	C 3	C 4	C 5	C 6	C 7			D 1	D 2	D 3	D 4	D 5	D 6	
6	Compulsory Modules																															
	CSC 322 - Computer Networks	✓	✓	✓		✓					✓	✓	✓						✓			✓	✓			✓						
	CSC 325 - Distributed Applications	✓	✓	✓		✓				✓	✓		✓						✓				✓			✓						
	CSC 443 - Thesis I	✓	✓	✓		✓				✓	✓	✓	✓					✓		✓	✓		✓			✓	✓	✓		✓		
	CSC 444 - Thesis II	✓	✓	✓		✓				✓	✓	✓		✓				✓		✓	✓		✓	✓		✓	✓	✓		✓		
	MAN 312 - Operations Management						✓													✓			✓	✓			✓					

Optional Modules																				
CSC 219 - Video Game Design	✓	✓	✓	✓														✓		
CSC 321 - Operating Systems	✓	✓	✓	✓														✓		
CSC 330 - Mobile Robotics	✓	✓	✓	✓														✓		
CSC 333 - Computer Networks II	✓	✓	✓	✓														✓	D	D
CSC 412 - Object Oriented Design Patterns	✓	✓	✓	✓														✓	D	D
CSC 421 - Computer Systems Security	✓	✓	✓	✓	✓													✓	D	D
CSC 422 - Advanced DBMS	✓	✓	✓	✓														✓	D	D
ECON 332 - International Economics																		✓		
FIN 220 - Investment and Portfolio Management				✓														✓		
MKTG 301 - Entrepreneurial and Corporate Market				✓														✓		
MKTG 303 - Tourism e-business				✓														✓		
MKTG 318 - Global Marketing				✓														✓		
MKTG 320 - Marketing Research				✓														✓		
MKTG 324 - e-Marketing				✓														✓		
MAN 302 - Revenue Management				✓														✓		
MAN 303 - Events Management				✓														✓		

	MAN 305 - HR in Hotel and Tourism						✓							✓					✓	✓	✓							✓					
	MAN 341 - Business in Greece and the EU						✓							✓					✓	✓	✓							✓					
	PRACTICUM 300 - Practicum	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

7. MODULE SPECIFICATIONS

1. Factual information			
Module title	COMPUTER SCIENCE 105: Introduction to Programming I	Level	4
Module tutor	Dr. Alexander Astaras	Credit value	15
Module type	Taught: Lecture/guided discussion	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements

This is an introduction to computing and computer programming using the Java language. It is one of the two options available for all students to satisfy the mandatory 1st year computing course requirement (the other option is CS101). It is the only option for those students interested in keeping their options open towards pursuing a major in Computer Science. This course is designed for students who have no prior experience in programming, just some basic exposure to computing devices as users.

3. Aims of the module

Students are introduced to the basic elements of computing hardware, information technology and computer programming. Programming is explained, demonstrated and practiced using the Java programming language. Ultimately the course aims to advance beyond basic computing skills towards software engineering, instructing students to develop autonomy as sophisticated computer users and programmers.

4. Pre-requisite modules or specified entry requirements

None. It is expected that students have already had some exposure to a windows-based graphical user interface computing environment (Microsoft Windows, Apple OS, Linux/Unix or equivalent).

8. Indicative content.

Hardware and Software (approx. 2 weeks)

- General computer science topics.
- Analog and binary signals.
- Machine language and high level languages.

Theory of Programming (approx. 2 weeks)

- Compilers
- Algorithms
- Problem Decomposition – Stepwise Refinement

Java Programming (rest of the semester)

- How to run Java programs.
- Translating Java source code into bytecodes.
- How byte codes are interpreted.
- How to create a Java program.
- Writing a program
- Java variable types
- Storing and changing values in variables
- Selection statements
- Repeating actions with loops
- Using arrays

- User input error trapping

1. Factual information

Module title	Computer Science 106 - Introduction to Programming II – Object Oriented Programming		
Module tutor	Mr. Pantelis Kaplanoglou	Level	4
Module type	Taught: Lecture/guided discussion	Credit value	15
Mode of delivery	100% face-to-face		
Notional learning hours	150		

2. Rationale for the module and its links with other modules

The course aims to refine the participants' fundamental programming skills. It builds upon CS105 (Introduction to Programming I) and serves as preparation for CS215 (Data Structures). It is based on the Java programming language.

3. Aims of the module

The module covers of Object Oriented Modeling and Applications. Topics include Object Models, Object Class Design, Inheritance and Polymorphism, Software Reuse with Classes, Application Modeling, Simulation with Object Classes, and Business Process Modeling with Objects.

Object-oriented programming (OOP) is a revolutionary concept that changed the rules in computer program development. OOP is organized around "objects" rather than "actions", data rather than logic. Historically, a program has been viewed as a logical procedure that takes input data, processes it, and produces output data. The programming challenge was seen as how to set up the logic, not how to define the data. Object-oriented programming adopts the viewpoint that “what we really care about” are the objects we want to manipulate rather than the logic required to manipulate them.

The module expands on the material covered in CS105 with the following aims:

- Further cultivation of algorithmic thinking and refinement of procedural programming skills
- Familiarization with the Object Oriented programming methodology
- Exposure to Java classes for building graphical interfaces and other extensions

4. Pre-requisite modules or specified entry requirements

CS105

8. Indicative content

Functions and modules

- *Methods*
- *Libraries and clients*
- *Recursion*

Object Oriented Programming Methodology

- *Data types*
- *Creating data types*
- *Inheritance*
- *Variable access control*
- *Polymorphism and Interfaces*
- *Testing and debugging*
- *Exception handling*

8. Indicative content

Interface design

- *Event handling*
- *Listeners*
- *Layout classes*
- *Inheritance*

1. Factual information			
Module title	COMPUTER SCIENCE 205 – Business Data Management	Level	4
Module tutor	Mr. Christodoulou, Chris	Credit value	15
Module type	Taught	Total learning hours	150

2. Rationale for the module and its links with other modules
The purpose of COMP SCI 205 is to introduce the idea of business data management, data modelling, and processing methodologies with the use of standalone design tools and personal databases. It aims at fostering proper data design through the relational methodology and developing all necessary data processing and presentation skills.

3. Aims of the module
<p>The aims of this module are to:</p> <ul style="list-style-type: none"> Define the role of Systems Analyst and Database designer. Explain System Analysis and interpersonal communication skills that the System Analyst must have Explain Project Management and discuss tools that the system analyst must have Explain the Methodologies that are used for Systems Analysis and Database Design Explain the various tools that certain methodologies use Provide students the opportunity to work on the most popular database (Oracle), in a project in order to implement the taught methodologies.

4. Pre-requisite modules or specified entry requirements
CS 105.

8. Indicative Content
This module deals with numerous forms of Business Data employed in monitoring business operations, including Data Analysis, Data Design, Table Design and learning how to implement them using two popular database programs.

1. Factual information			
Module title	COMPUTER SCIENCE 206 – Web Development	Level	5
Module tutor	Dr. Viktoratos Iosif	Credit value	15
Module type	Taught: Lecture/guided discussion	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements
COMP SCI 206 is an introductory module for beginning web designers. We will explore some essential concepts related to the creation of effective web sites. In the last portion of the module we will concentrate on client-side scripting using the programming language JavaScript.

3. Aims of the module
This module aims at introducing students the basic web design guidelines, Fundamentals of Hyper Text Markup Language (HTML), and how to use a Simple HTML Editor as well as Web Authoring Tools. Also, one of the main goals of the module will be to understand what scripting languages are and to be able to develop scripts.

4. Pre-requisite modules or specified entry requirements

8. Indicative content.
<p>Web Design Guidelines</p> <ul style="list-style-type: none"> ● What is the World Wide Web ● Basic Design Principles ● Interface & Navigation ● Good & Bad Design ● Colour on the WWW <p>Validation & Assessment</p> <ul style="list-style-type: none"> ● Validating HTML and CSS ● Accessibility & Usability ● Web site optimization <p>HTML & CSS basics</p> <ul style="list-style-type: none"> ● HTML source document, tags ● Lists, Tables, Links, Images, Graphics ● Intro to CSS ● CSS value and Common CSS Properties <p>HTML5 & CSS3</p> <ul style="list-style-type: none"> ● New elements ● Multimedia, Canvas element ● Forms and Styles <p>Web Authoring Tools</p> <ul style="list-style-type: none"> ● Setting Up a Web site ● Page Layout, CSS, Templates, Navigation ● Working with Texts, Lists and Tables ● Working with Images ● Adding Interactivity (Flash, Forms)

- Working with Online Data
- Building Dynamic Pages with Data
- Working with Code
- Publishing to the Web

JavaScript

- Introduction
- Variables
- Operators
- Functions, Statements
- Form validation

1. Factual information			
Module title	Computer Science 215 – Data Structures and Algorithms	Level	4
Module tutor	Mr. Pantelis Kaplanoglou	Credit value	15
Module type	Taught: Lecture/guided discussion	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements
The purpose of CS215 is to introduce students to the main concepts and implementation principles of data structures, using object oriented programming principles and Java as the programming language. This module builds on the knowledge and skills acquired in CS105 – Introduction to Programming I and CSC106 - Introduction to Programming II: Object Oriented Programming.

3. Aims of the module
The module starts with a fast paced review of object-oriented programming using Java, re-enforcing the fundamental programming concepts learned in CS105 and CS106. Students are subsequently introduced to data structures, including arrays, lists, queues, stacks, trees, heaps, hash tables and graphs. Searching, sorting, inserting, deleting and other simple operations on these structures will also be discussed.

4. Pre-requisite modules or specified entry requirements
CS106

8. Indicative content.
<ul style="list-style-type: none"> ▪ Java object oriented programming (review) ▪ Object-Oriented Design ▪ Stacks, Queues ▪ Vectors and Lists ▪ Big-O notation ▪ Sorting algorithms ▪ Trees ▪ Heaps ▪ Search Trees ▪ Hash Tables ▪ Sorting ▪ Graphs

1. Factual information			
Module title	COMPUTER SCIENCE 219 - Video Game Design with Unity and 3ds Max	Level	6
Module tutor	Brian C. Morris	Credit value	15
Module type	Taught: Lecture/guided discussion/Project	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements

This module introduces the critical study of computer video games and the professional practice of game design. Through readings, discussions, research, and practical “hands-on” projects, students will better understand the current market for games and simulations and develop the fundamental skills necessary to enter the international computer games industry. Although the commercial video game pipeline will be discussed, the actual production framework for the class will mirror an 'Indie' game team "prototype game level" development.

3. Aims of the module

Students will be expected to fill multiple roles in the production process and gain hands-on experience in the collaborative processes of game design, project management, scripting, content creation pipeline, in game animation, and play-testing.

4. Pre-requisite modules or specified entry requirements

Computer Science 107

8. Indicative content.

Video Game Theory and Concepts

Game Types

Anatomy of a Game

The Key Components of Video Games

Structure of a Video Game

Design Components and Processes

The Stages of the Design Process

The Game Design Team Roles

The Game Design Documents

Gameplay as challenges and actions

Core Mechanics

Game Balancing

General Principles of Level Design

3ds Max

3d modeling and materials

The Game industry

Game Engines

Game delivery environments

Unity 3d Game Engine

Unity 3d concept

Unity3d User Interface (GUI)

The 3d workspace

Unity Game Physics

Scripting in Unity

Player Camera Controllers

Terrains

Prefabs

Audio

Animation Particles AI and Enemies
Game Assets in Unity 3d Working with 3d assets in Unity Imported Assets and Packages Material and Textures

1. Factual information			
Module title	COMPUTER SCIENCE 306 – Advanced Web Development		
Module tutor	Dr. Viktoratos Iosif	Level	5
Module type	Taught	Credit value	15
Mode of delivery	100% face-to-face online		

2. Rationale for the module and its links with other modules
COMP SCI 306 builds upon the skills and knowledge about creating and publishing Web pages and sites taught in CS 206. It also introduces students to advanced web development areas, required for students interested in pursuing a career in web site design.

3. Aims of the module
This module aims mainly on client-side scripting using the programming language JavaScript. The objective will be to understand what scripting languages are and to be able to develop scripts. The module will also offer an introduction to jQuery library, Asynchronous JavaScript and XML (AJAX), basically showing the benefits of their use and applying it to certain programming tasks. In the last portion of the module, students will gain a practical knowledge on advanced issues of the mostly used web development language, namely PHP. By combining lectures with seminar discussions and extensive hands-on experiences the course will introduce the students both to the applied aspects of web application development technologies, but also to the theoretical issues involved.

4. Pre-requisite modules or specified entry requirements
CSC 206

8. Indicative content.
<p>JavaScript</p> <ul style="list-style-type: none"> ○ Advanced Techniques ○ Detect visitor's Browser & Platform ○ JavaScript Validation ○ jQuery library ○ jQuery UI & plugins <p>Asynchronous JavaScript and XML</p> <ul style="list-style-type: none"> ○ Basics ○ Ajax Frameworks ○ XML/CSS into Ajax Applications <p>Advanced PHP</p> <ul style="list-style-type: none"> ○ Object-Oriented PHP

8. Indicative content.

- Design Patterns for the Web

1. Factual information

Module title	COMPUTER SCIENCE 312 – Database Management Systems		
Module tutor	Christos Christodoulou	Level	5
Module type	Taught	Credit value	15
Mode of delivery	Taught, 100% face-to-face		
Notional learning hours	150; Notional value based on estimates of what it would take for a good student to achieve all learning outcomes		
Office hours			

2. Rationale for the module and its links with other modules

The purpose of COMP SCI 312 is to offer a systematic coverage of modern Database Computing theory and technology. Topics include Relational Algebra, Data Modelling, Database Design, Client-Server Database Management Systems, Interface Design, trends in Database Systems, combination of Object Oriented Modelling and Relational Databases.

This is a module in continuance of the CS 205 Business Data and it educates students how to create and maintain a fully functional relational database. This knowledge will be applied on CS 325, CS412, CS 422 and CS 444 where students are required to create and/or alter various databases, used along for programming assignments.

3. Aims of the module

The aims of this module are to:

Teach students what Client-Server Database Management System is, and

To use simple and advanced SQL along with PL/SQL programming features such as IF statements, loops, stored functions, procedures, tables, cursors, packages, triggers

To create and maintain an oracle database.

Microsoft Access and/or SQL Navigator for browsing objects and databases.

ERDPlus is used for ERD's.

Apex, SQL Plus and SQL Navigator are used as user interface of the oracle database

Students develop technical, analytical, and business skills that support the pursuit of professional careers and advanced computer science study.

4. Pre-requisite modules or specified entry requirements

CS 205 or permission by the Department.

8. Indicative Content

The module focus is on teaching SQL and PL/SQL programming languages for oracle databases. Advanced query capabilities and procedural constructs are described using Oracle SQL and PL/SQL. The theoretical foundation for using these capabilities is presented. Performance issues are discussed including indexing, key definitions, DE normalized databases and triggers, and data constraints. The role of application development in ease of use, query optimization, and system performance is discussed

1. Factual information			
Module title	COMPUTER SCIENCE 321 – Operating Systems	Level	6
Module tutor	Menelaos Karamichalis	Credit value	15
Module type	Taught: Lecture/guided discussion	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements
<p>The module deepens understanding of how contemporary computing systems are structured and, in particular, supported by an Operating System (OS). It is a culmination module within the Computing Systems programme thread.</p> <p>The module follows CS230-Introduction to Systems Programming and CS310 – Computer Architecture. The module is frequently updated in view of rapid technological developments and their implications.</p> <p>The module is followed by CS421 – Systems Security as well as any future module covering the subject at the advanced level.</p>

3. Aims of the module
<p>Operating Systems are the brain of any computing system. They handle the body/DNA (hardware) as well as behaviour (usage of system by user). Following rapid to revolutionary technological developments the field of Operating Systems also undergoes tremendous changes, which constantly evolve the conception of an OS and of course the technological challenges involved in its implementation. As such, virtualization technologies are presented, with virtual machines used in class, along with advanced virtualization techniques, such as containers. Finally, cloud services are presented and utilized as yet another method to implement an OS.</p> <p>The module aims at outlining the role of an OS in a diachronic way while comparing and contrasting design choices spanning the evolution of the field. It aims at defining fundamental needs that a von Neumann machine has from the Operating System in order to be functional, optimal and attractive to the user.</p> <p>The module explains Operating Systems architecture and examines trade-offs involved in different, evolving systems. It further examines diachronic as well as contemporary issues involved in Operating System design by comparing and contrasting relevant design and algorithmic choices.</p> <p>The module involves lab work: Communication with the OS at a low level via a Linux shell and programming tasks addressing aspects of Operating System design and implementation.</p>

4. Pre-requisite modules or specified entry requirements
CS 215, CS230, CS 310, STAT 205 or permission by the Department

8. Indicative content.
<ul style="list-style-type: none"> ▪ Computer System Structures ▪ Operating System Structures ▪ Processes ▪ Threads ▪ CPU Scheduling ▪ Process Synchronization ▪ Deadlocks ▪ Memory Management ▪ Virtual Memory ▪ File-System Interface ▪ File-System Implementation ▪ I/O Systems ▪ Mass-Storage Structure

- Virtual Machines & virtualization
- Containers

1. Factual information

Module title	COMPUTER SCIENCE 322 – Network Operating Systems and Administration	Level	6
Module tutor	Dr. Vagelis Chatzistavros	Credit value	15
Module type	Taught: Lecture/guided discussion	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements

COMP SCI 322 will address the principles, architectures and protocols that have gone into the development of modern networks from Local Area Networks to the Internet.

3. Aims of the module

This module aims to provide the student with the knowledge of how computer networks are designed, engineered and operated. This includes knowledge of the fundamental algorithms used in the management of both resources and traffic and how these algorithms may interact with application programs.

Instruction includes, but is not limited to network terminology and protocols, network standards, LANs, WANs, OSI models, cabling, cabling tools, routers, router programming, star topology, and IP addressing. The student will study and design networks using Ethernet, TCP/IP Addressing Protocol, and dynamic routing.

Particular emphasis is given to the use of decision-making and problem-solving techniques in applying science, mathematics, communication, and social studies concepts to solve networking problems.

4. Pre-requisite modules or specified entry requirements

CSC 215.

8. Indicative content.

- Client-server and peer-to-peer networks, network applications and protocols, hardware and topologies, OSI model, troubleshooting
- Networks and cabling, network diagrams
- MAC Address and functionalities, TPC/IP configurations and subnetting, DNS and name resolutions, command-line troubleshooting problems
- TCP/IP core functions, communications' management, TCP/IP utilities
- Data transmission concepts and metrics, cables physical characteristics, various networking media
- Wireless networking: theoretical background and implementation
- Subnets and VLANs: subnet implementation and vlan operation

1. Factual information			
Module title	COMPUTER SCIENCE 325 – Distributed Applications	Level	6
Module tutor	Mr. Chris Christodoulou	Credit value	15
Module type	Taught	Total learning hours	150;
Office	Bissel 021	Module type	Taught
Office hours		Contact Hours	22

2. Rationale for the module and its links with other modules
<p>The purpose of CS 325 is to examine in detail the software and hardware technologies prevalent in the Internet and provide an introduction to the principles and methods for creating distributed on-line client/server applications that are the basis for electronic commerce as it is conducted over the Internet. Methods and tools such as HTML, the Common Gateway Interface, PHP, database connectivity tools and MySQL are presented. Coverage is also given to emerging standards for information exchange, encryption and validation.</p>

3. Aims of the module
<p>The aims of this module are to teach students the technological background as well as programming languages useful in developing and deploying internet-based applications with dynamic content. Students will learn the difference between server-side and client-side programming, the overall architectural framework of such application systems and the differences between emerging distributing technologies.</p>

4. Pre-requisite modules or specified entry requirements
CS 105

8. Indicative content.	
Distributed Systems:	Introduction to Distributed Systems, Resource sharing and the Web Architectural Models, Fundamental Models
Protocols	Networking and InterNetworking, Network Principles, Internet
	Network Cases (Ethernet, Mobile, ATM)
PHP:	Variables, Data types, Operators, Expressions
	Control flow statements, Functions
	Arrays, Objects
MySQL:	MySQL Data types
	Basic sql statements
	Transactions and Stored Procedures
	Integration with PHP

1. Factual information			
Module title	COMPUTER SCIENCE 330: Mobile Robotics Programming	Level	4
Module tutor	Dr. Alexander Astaras	Credit value	15
Module type	Taught: Lecture/Laboratory	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements

Autonomously navigating mobile robots face the challenge of acquiring data from their surroundings, selecting their own navigation waypoints and dynamically altering their course of action to account for obstacles, power supply restrictions and unexpected events. In this course theoretical instruction is combined with experiential learning and challenge driven software development. Students participating in this course are challenged individually and in teams to build the hardware chassis and software control algorithms for mobile robots. An introduction to robotics fundamentals is followed by guided programming for automation (C, RobotC); basic electronics circuit design and troubleshooting; microcontroller programming; sensor data acquisition algorithms; actuator control; robotic navigation and obstacle avoidance; basic sensor data fusion; and concludes with a final robotic design challenge which integrates all aforementioned knowledge and skills. This module builds on knowledge and skills acquired in CS230 – Introduction to Systems Programming.

3. Aims of the module

Students are guided through a series of lectures, experiments, design challenges and a final course project, learning to holistically design software, electronic circuits and mechanical constructions. Upon completion of the course, they are expected to be able to:

- build, program and troubleshoot mobile robots with a variety of roaming behaviours
- build and debug software to intelligently control mobile robotic systems using the Robot-C language
- design for unforeseen real-world circumstances, producing robust code and mechatronic designs which anticipate unknown changes in the robot's environment
- program a microcontroller board to automatically sample and control a variety of sensors and actuators
- design experiments which prove, characterize, extract and optimize performance parameters from each of their robot prototypes

4. Pre-requisite modules or specified entry requirements

CS230

8. Indicative content.

- Microcontroller programming using C
- Sensors and actuators
- Analogue circuit troubleshooting
- Robotic shell design using EV3
- Higher level programming for robotic control
- Mobile robotic algorithm design using Robot-C
- Mobile robotic control based on sensor data fusion
- Debugging and troubleshooting techniques
- Experimental characterization of robotic designs

1. Factual information			
Module title	COMPUTER SCIENCE 333 – Computer Networks II		
Module tutor	Dr. Chatzistavros Vagelis	Level	6
Module type	Taught: Lecture/discussion	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours 150	The OU honours degrees conform to the current European qualifications framework. This indicates how the OU credit measures against the European credit transfer system (ECTS). In essence, 60 OU credit points are the equivalent of 30 ECTS points.		

2. Rationale of the course within the degree scheme/Prerequisites/other entry requirements
This course is offered as a Level 6 Elective to students that have passed course CS322 (Computer Networks I). The course builds on the material learned in CS322 and expands the students' knowledge and understanding to more advanced and complex network concepts and designs. The focus is mainly routing and switching in LANs and WANs, but other major areas of networks like wireless, security and Broadband technologies. Completing CS322 and CS 333 a student is eligible to take the exam for the Cisco CCNA certification.

3. Aims of the course
The aims of the course are to expand students' knowledge in modern day networks. There are three primary goals; expand the strong foundations for Local Area Networks built in CS322, introduce Wide Areas Network Design and Technologies, and provide the fundamentals of trending networking areas including, but not limited to, wireless and security.

4. Pre-requisite courses or specified entry requirements
CSC 322

6. Indicative content
<ul style="list-style-type: none"> ● Switching Fundamentals ● Advanced Routing Protocols ● Wide Area Network and Broadband Technologies ● Securing Connectivity ● Monitoring and Troubleshooting Networks ● Network security

1. Factual information			
Module title	COMPUTER SCIENCE 340: Introduction to Artificial Intelligence and Machine Learning using Python	Level	5
Module tutor	Dr. Alexander Astaras	Credit value	15
Module type	Taught: Lecture/Laboratory	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements

The discipline of artificial intelligence (AI) is concerned with building intelligent algorithmic agents, computing algorithms which perceive their circumstances and take actions which maximize their chance of successfully achieving their goals. This includes machine learning algorithms, intelligent agents which modify their function based on past encounters with input data, under either supervised or unsupervised training circumstances.

This course is designed for intermediate programmers who can already code using structured programming and object-oriented methodologies (in any computing language), as well as have some intermediate level understanding of data structures, search and sorting algorithms.

3. Aims of the module

This course is an introduction to the field of AI and more specifically Machine Learning, including an intensive initial introduction to the Python programming language. Indicative AI topics covered include knowledge representation, problem solving via search, logical and probabilistic reasoning and machine learning algorithms such as decision trees, neural networks, reinforcement learning and genetic algorithms.

4. Pre-requisite modules or specified entry requirements

CS215

8. Indicative content.

Introduction to the Python programming language (approx. 3 weeks)

- syntax, strings basic I/O commands
- variables, conditionals and basic control flow
- loops
- collections: lists, dictionaries, tuples, sets
- functions, libraries
- file I/O

Selected topics in Artificial Intelligence and Machine Learning (approx. 3 weeks)

- informed and uninformed search
- constraint satisfaction
- reinforcement learning
- probability
- Bayes networks
- artificial neural networks
- genetic algorithms

1. Factual information

Module title	COMPUTER SCIENCE 412 – Object Oriented Design Patterns	Level	6
Module tutor	Mr. Kaplanoglou Pantelis	Credit value	15
Module type	Taught: Lecture/guided discussion	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements

The module revisits Object Oriented application development methodology at the Senior level, examining its effectiveness in the life cycle of professional applications and software reuse through the adoption of Object Oriented Design Patterns. It presupposes the knowledge earned through the introductory line of the Programming Fundamentals programme thread and follows level 5 modules relating to Data Modelling (CS 312) and Systems Design (CS450) while specialising them within the context of Web Development. Currently CSC 325 (Distributed Systems) is a necessary prerequisite concerning web deployment technologies.

The module mostly emphasizes the employment of OO concepts to Web Development yet it is of general enough nature for a level 6 module as the design patterns examined are applicable to a wide range of technologies and application domains.

3. Aims of the module

Major aims of the module are to teach object oriented modelling and reusable or ad hoc class design. The major features of OOP will be reviewed along with examples and their utility in building reliable applications will be discussed. UML will be used for modelling and connection of the formal models with language-specific class features will be elaborated. Design patterns will be examined in conjunction with OO language features and their utility in reliable application development will be thoroughly investigated.

The module focuses around development of Web applications and the tools chosen will be suitable for this class of applications. The MVC design pattern will be presented and a development environment supporting the framework will be employed throughout the second half of the semester in order to examine object orientation in each aspect of the framework. MVC is a Design Pattern in itself.

4. Pre-requisite modules or specified entry requirements

CS 215, CS 312, CS325 or permission by the Department.

8. Indicative content.

1. Review of Object-Oriented Concepts
2. Advanced Object-Oriented Concepts and introduction to Design Patterns
3. Design Patterns and Class Design guidelines
4. Mastering Inheritance and Composition
5. Frameworks and Reuse: Designing with Interfaces and Abstract Classes
6. Designing with Interfaces and Abstract Classes
7. Creating Object Models
8. Objects and Portable Data: XML and JSON
9. Persistent Objects: Serialization, Marshalling, and Relational Databases
10. Objects in Web Services, Mobile Apps, and Hybrids
11. Model, View and Controller issues of class design
12. SQL injection and similar cyber security threats

1. Factual information

Module title	COMPUTER SCIENCE 421 – Computer Systems Security	Level	6
Module tutor	Menelaos Karamichalis	Credit value	15

Module type	Taught: Lecture/guided discussion	Notional learning hours	150
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2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements

The module examines security issues in networked and non-networked environments. It is a senior-level module (level 6) for the Computing Systems programme thread. It follows CS321 – Operating Systems and CS322 – Network Operating Systems and Administration. The module provides the theoretical background and practical tools so that using the provided framework existing and future security threats can be analyzed and guarded against.

3. Aims of the module

The module aims at engaging a student's critical thinking in analyzing security threat scenarios and providing mitigation strategies. The theoretical and practical background concerning issues of security in modern, networked and non-networked systems is provided first. Then, the state of the art approaches are covered, focusing on current best practices. The module relies heavily on case studies and articles on recent news, so it is both current and relevant.

4. Pre-requisite modules or specified entry requirements

CSC 321, CSC 322 or permission by the Department.

8. Indicative content

- Securing data at rest and data in transit:
 - Essential Encryption Algorithms
 - Key management and credentials
 - Steganography and watermarking
- Human psychology
- Physical layouts
- Network security (network segmentation, VLAN, VPNs, jump servers, firewalls)
- Network Monitoring (HIDS, NIDS, CMDB, application-level firewalls, honeypots)
- Compliance (regional laws affecting audits & network design)
- Virtualization and security
- System Security Policies and Best Practices
- Threat models
- Software development
 - Agile Development
 - Coding practices
 - Software release practices
 - DevOps
- Cloud Computing security considerations

1. Factual information			
Module title	COMPUTER SCIENCE 422: Advanced DBMS		
Module tutor	Mr. Christos Christodoulou	Level	6
Module type	Taught: Lecture/discussion	Credit Value	7.5
Mode of delivery	100% face-to-face		
Notional learning hours 150			

2. Rationale for the module and its links with other modules
The module expands and deepens understanding of DBMS extending beyond a first year of exposure to the fundamentals. It extends CS312, which has provided the foundations on SQL and PL/SQL. Theoretical issues are examined with the intention of performance optimisation. The module aims at better equipping programme graduates towards the competitive DB market.
3. Aims of the module
This module focuses on creating and manipulating databases using SQL and PL/SQL programming languages for Oracle databases. Advanced query capabilities and procedural constructs are described using SQL and PL/SQL. The theoretical foundation for using these capabilities is presented. Performance issues are discussed including indexing, key definitions, and data constraints. The role of application development in ease of use, query optimization, and system performance is discussed. The module aims to teach students to use advanced SQL statements and PL/SQL programming features such as IF statements, Loops, Stored Functions/Procedures, Tables, Cursors, Stored Packages, Stored Triggers and creating and maintaining various databases. SmartDraw and Designer of Oracle is used for ERD's. APEX, SQL Plus and SQL Navigator, SQL Server Management Studio are used as user interface of the databases.
4. Pre-requisite modules or specified entry requirements
CS 312

6. Indicative content.
ERD and UML Modelling
Practical Database Design Methods and use of
Indexing Structures for Database Files
Practical Database Design and Tuning
Database Security and Authorization
Enhanced Data Models (Triggers)
Distributed Databases and Client-Server Architectures
Emerging Technologies: XML and Internet Databases
Data mining Concepts
Emerging Database Technologies & Apps

1. Factual information			
Module title	COMPUTER SCIENCE 443 - Capstone Project I	Level	6
Module tutor	Dr. Alexander Astaras	Credit value	15
Module type	Taught: Lecture/Laboratory	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements
<p>The module is the second half of a year-long capstone project, concluding the students' four-year learning experience in the Computer Science and Business & Computing study programs. It is designed to foster research, autonomy and synthesis of concepts and skills acquired in all other modules. The first half of the capstone project (CS443) is devoted to research/analysis and design, while the second semester counterpart (CS444) places emphasis on implementation, experimental validation, thesis writing and final project presentation.</p>

3. Aims of the module
<p>To provide students with an opportunity to work in a guided but increasingly independent fashion, to explore a particular problem in depth, to make practical use of principles, techniques and methodologies acquired elsewhere in the module. To challenge students to form a scientific thesis, carry out a sustained piece of individual work to prove or disprove it, and to present their project work in a dissertation. To enhance communication skills, both oral and written.</p>

4. Pre-requisite modules or specified entry requirements
CS312, CS450

8. Indicative content.
<p>The module deals with the definition and formal proposal phase of a major Computer Science and/or Business Computing IT project. It involves learning to brainstorm for project topic ideas, filter and prioritize them, develop a thesis statement, build a brief project proposal description, seek a faculty member to act as a supervisor for the capstone project, write a thesis proposal, design a poster and deliver a final slide presentation outlining the proposed project.</p>

1. Factual information			
Module title	COMPUTER SCIENCE 444 - Capstone Project II	Level	6
Module tutor	Project supervisors (various faculty)	Credit value	15
Module type	Taught: Lecture/Laboratory	Notional learning hours	150

2. Rationale of the module within the degree scheme/Prerequisites/other entry requirements

The module is the second half of a year-long capstone project, concluding the students' four-year learning experience in the Computer Science and Business & Computing study programs. It is designed to foster research, autonomy and synthesis of concepts and skills acquired in all other modules. The first half of the capstone project (CS443) is devoted to research/analysis and design, while the second semester counterpart (CS444) places emphasis on implementation, experimental validation, thesis writing and final project presentation.

3. Aims of the module

To provide students with an opportunity to work in a guided but increasingly independent fashion, to explore a particular problem in depth, to make practical use of principles, techniques and methodologies acquired elsewhere in the module. To challenge students to form a scientific thesis, carry out a sustained piece of individual work to prove or disprove it, and to present their project work in a dissertation. To enhance communication skills, both oral and written.

4. Pre-requisite modules or specified entry requirements

CS443

8. Indicative content.

The module deals with the development, experimental validation, thesis document writing and presentation phase of a major Computer Science and/or Business Computing IT project. It involves learning to brainstorm for project development solutions, filter and prioritize them in consultation with the project supervisor, organize and implement development, troubleshoot, build a proof-of-concept prototype, plan validation experiments, write a thesis document which provides a scientific literature context and outlines originality, design a poster and deliver a final slide presentation describing all capstone project work.

1. Factual information			
Module title	COMPUTER SCIENCE 450 - Systems Analysis and Design		
Module tutor	Mr. Chris Christodoulou	Level	5
Module type	Taught: Lecture/discussion	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours	150		

2. Rationale for the course and its links with other courses

The course serves as a capstone for the Junior year, aiming to unify all prior knowledge from the viewpoint of Systems Analysis and Design. As students have already been exposed to various aspects of computer systems, the course introduces them to the development life cycle of real-world, professional applications.

The course introduces the waterfall model for system/application development and the formal tools employed in its various stages with emphasis in prototyping, system implementation and testing.

Students entering the course are expected to have adequate knowledge of data modelling (CS205, CS312), hardware (CS310). The knowledge acquired in this course, will be applied on CS443 and CS444 where students are required to research and create a capstone project.

3. Aims of the course

The course introduces the waterfall model for system/application development and the formal tools employed in its various stages. The objectives of the course are to:

- Provide formal tools for functional and non-functional requirements collection and documentation (ERD, UML, DFD, STD's)
- Define the role of the systems analyst and designer.
- Build project management and interpersonal communication skills that the system analyst must have.
- Explain the methodologies that are used for systems analysis and design.
- Follow through the waterfall model (and discuss deviations therefrom), presenting the relevant tools at each stage.
- Provide the problem solving background for resolving trade-offs inherent in design.
- Present principles of quality and correctness testing.
- Provide students the opportunity to work as a team of analysts and designers in a project to implement the taught methodologies.

Students develop technical, analytical and business skills that support the pursuit of professional careers and advanced computer science studies.

4. Pre-requisite courses or specified entry requirements

CS312, CS310 or permission by the Department.

8. Indicative content

The course main focus is Systems analysis where students learn problem-solving techniques to decompose a system into its component pieces for the purpose of studying how well those component parts work and interact to accomplish their purpose.

- Scope analysis and feasibility study.
- Requirements collection and formal tools (ERD, UML, DFD, STD).
- Design: trade-off analysis and formal tools for decision making.
- Implementation phase: actions and deviations from Waterfall model.
- Unit and System testing.
- Deployment and Maintenance.
- Project management throughout the cycle.

1. Factual information

Module title	Economics 101 - Introductory Macroeconomics		
Module tutor	Dr. Ioannis Krassas	Level	4
Module type	Taught: Lecture/discussion	Credit Value	15
Mode of delivery	100% face-to-face		

Notional learning hours: 150	
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2. Rationale for the module and its links with other modules

The course provides an overview of the basic economic principles and their applications to many real life situations. It previews some of the big ideas that recur throughout economics, such as opportunity cost, the tools of supply and demand. It also focus on the applications of economic theory to national policy issues such as growth, inflation, unemployment, government expenditures, taxation finance and the role of money.

3. Aims of the module

The course seeks to develop an understanding how an economy works. It enables students to get a better understanding of the world they live in. It also helps them make better decisions as individuals or future executives in any type of organization or venture. All courses are linked to economics because most decisions and policies are made within an economic framework.

4. Pre-requisite modules or specified entry requirements

NONE

1. Factual information

Module title	MATHEMATICS 115 – Business Calculus		
Module tutor	Dr. Kanakoglou Konstantinos	Level	4
Module type	Taught: Lecture/discussion	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours: 150			

2. Rationale of the module within the degree scheme

The purpose of MATH 115 is to present mathematical skills and concepts and to apply them to ideas that are important to students in the management, life, and social sciences. In particular, the course will introduce the student to the concepts of limits, differentiation and integration with emphasis on text problem solving.

3. Aims of the module

The module is designed to give students a sound intuitive understanding of basic concepts and enable students to apply a variety of techniques to practical situations. Differentiation, Integration etc. are some of the topics that will be presented in this module and then applied to optimization problems (Business and Science), rates of change problems and other applications. The module will be text oriented and intends to help students to develop their critical thinking and problem solving ability. Upon completion of this module, it is the aim and hope of the mathematics faculty that students who work hard and apply themselves will be able to:

1. Acquire a solid foundation in Differential and Integral calculus in order to prepare for other university modules that require such knowledge.
2. Understand how math can model and solve authentic real world problems.
3. Develop problem-solving skills, fostering critical thinking, within a varied and interesting setting.
4. Encourage modeling and connecting Mathematics to various disciplines.

4. Pre-requisite modules or specified entry requirements

MATH 101 or CS 180

6. Indicative content

Functions, Graphs, and Limits

Applications of Derivatives

Additional Applications of the Derivative

Exponential and Logarithmic Functions

Integration

Functions of Two or more Variables

1. Factual information

Module title	FIN 201 Financial Management		
Module tutor	Dr. Ioannis Krassas	Level	5
Module type	Lectures and seminars	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours: 150			

2. Rationale for the module and its links with other modules

The course provides an overview of the basic financial concepts and their applications to the modern corporate world. It focuses on problem-solving methodology and real-life financial management practices, all within an evaluation and ethical framework.

3. Aims of the module

The course seeks to develop students' understanding of the key concepts of financial management necessary for making and evaluating financial decisions.

4. Pre-requisite modules or specified entry requirements

Accounting 102

1. 1. Factual information

Module title	FIN 220 Investments & Portfolio Management		
Module tutor		Level	6

Module type	Lectures and seminars	Credit value	15
Mode of delivery	100% face-to-face		
Notional learning hours	150 hours The OU honours degrees conform to the current European qualifications framework. This indicates how the OU credit measures against the European credit transfer system (ECTS). In essence, 60 OU credit points are the equivalent of 30 ECTS points.		

2. Rationale for the module and its links with other modules

Investments & Portfolio Management is a fourth year-second semester course that completes the students' knowledge of the asset classes & global investment choices in order to form an optimal portfolio. This final semester course combines all prior knowledge on macroeconomics, microeconomics, finance and investments. It is a required course only for Finance majors and optional for all other business students

3. Aims of the module

The principal purpose of this course is to provide a comprehensive analysis of the characteristics and analyses of individual securities, as well as the theory and practice of combining securities to form optimal portfolios. The aims of this course are to:

- provide an overview of the entire investment scene
- survey various investment alternatives and their opportunities from the viewpoint of risk and return
- treat asset pricing models and the efficient market hypothesis (EMH)
- review the role of behavioral finance and how it affect EMH
- examine the formation of optimal portfolios
- examine the analysis, valuation and management of stocks
- treat the theory of the term structure of interest rates, bond pricing and the management of bond funds
- introduce the fundamentals of option valuation and trading

4. Pre-requisite modules or specified entry requirements

FIN 201 Financial Management

6. Indicative content.

Overview of Corporate Finance

- Introduction to Corporate Finance
- Types of Business Entities

Financial Statements and Long-term Financial Planning

- Working with Financial Statements
- Financial Statements, Tax, Income, Cash statements
- Long-term Financial Planning and Growth
- Financial Ratios

Valuation of Future Cash Flows

- The Time Value of Money
- Discounted Cash Flow Valuation
- Annuities, Perpetuities, the EAR
- Loan Types & Applications

Capital Budgeting (Investment Criteria)

- Net Present Value, Payback period
- IRR, PI,

Short-term Financial Planning and Management

- Short-term Finance and Planning
- Cash and Liquidity Management

1. Factual information

Module title	Management 101: Introduction to Management		
Module tutor	Dr. Dimitris Hatjidis	Level	4
Module type	Lectures and seminars	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours: 150			

2. Rationale for the module and its links with other modules

An introduction to the general field of Management. It covers the basic managerial concepts through the presentation and the analysis of the four managerial functions: Planning, Organizing, Leading and Controlling. It is a foundation for upper level management courses.

3. Aims of the module

The module seeks to develop students' understanding of the fundamental role of management in both theory and practice. To familiarize them with effective Management practices needed to operate in a challenging business environment impacted greatly by the forces of globalization.

4. Pre-requisite modules or specified entry requirements

None

6. Indicative content.

Managers and Managing: Essential tasks, levels, challenges in a global environment

Fayol's Principles of Management

Values, Attitudes, Emotions, and Culture: Personality traits, values, Organizational culture

Ethics and social responsibility: Nature, Stakeholders and ethics.

Managing diverse employees: Managers and the effective management of diversity

Managing in the global environment: The changing global environment

Decision making: Nature of managerial decision making, Cognitive biases, entrepreneurship

Organizational control and change: Output control, behavior control, clan control

Motivation and performance: Need theories, Expectancy theory, Equity theory, Learning theory

The manager as a planner and strategist: The nature of the Planning process

Value Chain Management: The value chain and competitive advantage, Customer responsiveness

Leadership: Nature, Models of leadership

Effective groups and teams: Types, Group dynamics

Managing & Managers

Essential tasks, levels, challenges in a global environment.

The Evolution of Management Thought

Scientific Management, Administrative Management Theory, Fayol's Principles for Management, Theory X vs Y, Other theories

William Edwards Deming Style of Management

14 Points System for (transforming) Management, Faulty Practices for Management with Suggestions for Better Practices.

Lecture Notes & Other Readings

Ethics and CSR

Ethics, Reputation, Sources of Business Ethics, Approaches for CSR, Benefits from being socially responsible as a business

Managing Organizational Culture and Structure

Different types of structures, Integrating Soles, Factors shaping up Culture

Mid-Term Revision, Human Resource Management

Mid-term Revision, Mid-Term Exam, HRM Basic Scope, Key issues in HRM, Performance appraisal, Communication, Compensation

Motivation and Performance

Motivation, Expectancy and Equity Theories, Operant conditioning theory and Social learning theory. Motivation & Pay

Organizational Control & Change

Control Process, Output Controls, Behaviour Controls, Managing Change.

Decision Making, Learning, Creativity, and Entrepreneurship

Steps for Decision Making, Group Decision Making, Learning & Creativity,

Manager as a Planner and Strategist

Planning Process, Planning & Strategy

Leadership & Final Project Presentations

Leadership, Traits of Leaders, Contingency Models of Leadership

1. 1. Factual information

Module title	MNGT 201 Organisational Behaviour		
Module tutor	Dr. Dimitris Hatjidis	Level	5
Module type	Taught	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours: 150 hours			

2. Rationale for the module and its links with other modules

The unit covers particular issues about the study of individual, group and structural behavior within organizations. In particular, the unit examines the impact of the human behavior issues on organizational performance and success. It is widely recognized that the knowledge of organizational behavior is critical in modern corporations and public bodies and determines in a high rate their effectiveness and efficiency. It helps students develop plans on how to mobilize people to reach their maximum potential so that it can lead to better organizational performance. It is linked with other courses of the institution such as Business Strategy and Human Resource Management.

3. Aims of the module

This Module aims to introduce students to the study of organizations, their forms and structures, in relation to individual behavior, group dynamics, Emotional Intelligence and the way in which each affects organizational systems. Emphasis is given on discussing and analysing theoretical aspects of group and individual behavior and indicating their applicability within an organizational setting.

4. Pre-requisite modules or specified entry requirements

Management 101-Introduction to Management

7. Indicative content.

Introduction in Organisational Behaviour
International and organizational culture
Understanding and managing individual behavior
Individual Differences at work
Perceptions and attributions
Motivation: Background and theories
Managing employee behavior
Managing workplace stress
Group and team behavior
Conflict and Negotiation , Leadership
Communicating effectively
Decision making Organizational structure and design
Managing organizational change and learning

1. 1. Factual information

Module title	MNGT 302- Revenue Management		
Module tutor	Staff	Level	6
Module type	Lectures and seminars	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours			

2. Rationale for the module and its links with other modules

With a fixed capacity, a highly disposable product and high fixed costs, hotels are a natural candidate for the application of revenue management. The purpose of this course is to provide a core understanding of the fundamentals of revenue management, which ties into the larger picture of revenue strategy. The course is structured to provide an insightful look into Revenue Management.

In today's hotel sector an increasingly complex network of traditional and web based channels have to be managed to insure hotel success. Key questions include: how should you distribute over the web? How can you maximise the potential of online travel agents (OTAs)? With the distribution environment both highly complex and constantly evolving, this course will give you comprehensive foundation.

3. Aims of the module

Upon completion of the module, students will be able to

- Understand the terms of:

3. Aims of the module

- Hotel Rate Distribution
- Revenue management
- Optimization of the pricing policy
- Implement in business environment:
 - Market segmentation
 - Set price mix

4. Pre-requisite modules or specified entry requirements

N/A

6. Indicative content.

Students attending the module classes have the opportunity to be introduced to the subjects of:

- Necessary conditions for RM
- RevPar – Calculate the Revpar
- Manage the price and the duration
- Revenue management implementation
- Revenue management in other industries and hotel outlets
- Pricing strategy & the benefits of the rate fences
- The importance of forecasting and forecasting challenges
- Segmentation and price discrimination. Strategic pricing.
- Setting & positioning price

1. 1. Factual information

Module title			
MNGT 303-Events management			
Module tutor	Staff	Level	6
Module type	Lectures	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours			

2. Rationale for the module and its links with other modules

This course will provide industry-specific knowledge of events planning and running. It will offer a comprehensive overview of events management, covering all types of event destinations, venues and operations. Specific attention is paid to the analysis, management and monitoring of the economic and tourism benefits of the events sector. Topics that will be covered include event management, planning, operations, logistics, quality management, coordination of HR, financial management and marketing of events, communications, and evaluation and impact assessment methods. Participants will also be given a wide range of event studies in order to learn from prior industry experience.

3. Aims of the module

After successful completion of the module attendance, students will be able:

- Understand the significance of events in the context of tourism.
- Evaluate the scope and potential of the events sector.
- Application of management and marketing principles to the planning, monitoring and evaluation of events.
- Classify the types of events and explain their role.
- Determine the steps necessary to create a successful event.

4. Pre-requisite modules or specified entry requirements

N/A

6. Indicative content.

The module encompasses subjects as below:

- Event organizing and management
- Work distribution and team management
- Events categories
- Mega events, benefits and side-effects
- Cross cultural and cultural interaction
- Demand and Supply in event industry
- Event and tourism industry interconnection
- Online practice using events platform

1. 1. Factual information

Module title	MNGT305-HR in Hotel & Tourism		
Module tutor	Anestis Th. Anastasiou	Level	5
Module type	Taught	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours			

2. Rationale for the module and its links with other modules

Hospitality is a concept deeply rooted into Greek mentality. Intuitive hospitality is offered by all tourism professionals and the country is renowned for this quality. Nevertheless, contemporary developments and cultural trends make it necessary for professionals to be educated according to today's needs. This course

2. Rationale for the module and its links with other modules

covers a wide range of topics that include advance hospitality management theory, impact of socio-economics and technology on hospitality, the future trends, laws relating to business ownership, current practices, legislation and ethics in hospitality practices, operations of revenue, logistics in accommodation for guests, guest handling, and various segments such room, concierge, food and beverage, pools, casinos, beach-bars and restaurants.

3. Aims of the module

This unit aims to introduce students to the study of the personnel management theory and practices within a hospitality industry content. Emphasis is given on discussing and analysing theoretical aspects of recruiting and selecting hospitality employees, performance evaluation, theories and principles of employee motivation.

4. Pre-requisite modules or specified entry requirements

Management 101-Introduction to Management

6. Indicative content.

- Job design and organisational structure
- Job description, specification, analysis
- Recruitment
- Selection
- Hiring processes
- Induction training (onboarding)
- Assessment and evaluation
- Performance Management and metrics
- Talent acquisition and management
- Remuneration and reward strategy
- Training and Development

1. 1. Factual information

Module title	MNGT 312 (Operations Management)		
Module tutor	Dimitris Hatzidis	Level	6
Module type	taught	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours: 150			

2. Rationale for the module and its links with other modules

The course seeks to develop students' understanding of the fundamental role of operations management in both services and manufacturing. Students are exposed to concepts, problems and analysis related to the strategy, design, planning, and improvement of manufacturing and service operations. The course serves to link operational issues to managerial strategy issues and provides key input for students to undertake their final capstone project

3. Aims of the module

This course will cover the following thematic areas: new corporate trends, corporate strategies, product design, process management, principles of quality management, inventory management and total corporate planning using the MRP-ERP

3. Aims of the module

framework, management of supply chains. The course will also introduce a set of quantitative and analytical tools that can be used in almost any context, including project management, decision trees and process analysis

4. Pre-requisite modules or specified entry requirements

Management 101

6. Indicative content.

Intro: The transition from the 2nd to the 3rd industrial revolution and key corporate trends

Corporate competitive strategies and global corporate strategies

Principles and methods used for Product Design
Case studies in Product Design and decision Tree analysis

Process management in goods & service
Case studies in process management

Project Management
Lab sessions on Project Management

Quality management and TQM models
Case studies in quality management and TQM tools

Principles for the management of supply chains
Case studies and tools for supply chain management
Supply chain management for e*business

Inventory management & inventory optimization models
The MRP-ERP framework for total corporate planning

1. 1. Factual information

Module title	MGT 341 (Business in Greece and the European Union)		
Module tutor	Dimitris Hatzidis	Level	6
Module type	taught	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours			

2. Rationale for the module and its links with other modules

The rationale of this course is to give students some insights into the complexities of the European environment from a global, business, political and legal perspective. It also explores the different ways in which the European Union institutions have a determining influence on any company working in or with the European Single Market. Particular focus is placed on doing business in Greece and South Eastern Europe. The course allows students to place many of the issues visited in various business courses in the context of the European Union and its unique institutional arrangements

3. Aims of the module

This course will centre around the analysis of the business environment, placing it in the context of the European Union, The corporate implications of European Institutions and the policies of the European Union will be a key theme. Related themes for exploration include: the political economy of capitalist varieties in Europe, comparative analysis between EU economies and corporate implications, comparative analysis of the EU to the USA, The Euro and the Eurozone, corporate culture and ethics, Greece in the European context, integrating Eastern Europe into the EU, Europe in the global arena and the European crisis

4. Pre-requisite modules or specified entry requirements

Econ 102, Econ 101

6. Indicative content.

Methodological analysis of the Business Environment

European Union in the context of globalisation
Theories of economic integration

The institutions of the European Union

The common policies of the European Union and corporate implications

The Single European Market

The European Monetary Union, the Euro and corporate implications

The Greek economy and business environment

Comparative analysis of European economies
The typologies of European economic models

European & US economies: Comparative analysis
The economic and institutional crisis in Europe

The European context of the Greek economic crisis
Greek economic prospects under the Troika's conditionality

Political economy: Varieties of capitalism in Europe
Core Europe and the Periphery

Case Studies: Typologies of economic and political models in Europe and implications for corporations
The economies of Eastern Europe: Transition to capitalism and European Union integration
Transition and European integration for South Eastern Europe

Europe in the global economic arena (globalization revisited)
Course Overview

1. 1. Factual information

Module title	Marketing 301 Marketing Strategy & Brand Management		
Module tutor	Konstantinos Rotsios	Level	6
Module type	Taught	Credit value	15
Mode of delivery	100% face-to-face		
Notional learning hours: 150			

2. Rationale for the module and its links with other modules

The course offers an in-depth examination and analysis of the basic marketing principles. A considerable effort is made to provide students with the elements of advanced marketing thinking in structuring innovative marketing strategies for various corporations. Students are prepared to work in the competitive and dynamic field of marketing and implement planning and execution skills within a rapidly changing environment. It is an upper level required marketing module.

3. Aims of the module

The course seeks to develop students' understanding of the fundamental role of Marketing in modern organizations and to comprehend the type of managerial decisions that need to be taken in order to help a company succeed in the marketplace.

3. Aims of the module

The course aims to develop the business acumen of students and enhance marketing confidence through knowledge and experience with real business cases and marketing simulation. Also, the course emphasizes the central role of branding in strategy formulation and addresses contemporary tactics including experiential branding, brand advocacy, brand activism, and fostering brand communities.

4. Pre-requisite modules or specified entry requirements

MKTG 101 Introduction to Marketing

6. Indicative content.

Marketing strategy in today's business environment
Global, ethical and sustainable marketing
Elements of marketing strategy, planning and competition
Understanding consumer and business markets
Segmentation, target marketing and positioning
Developing the value offering
Brand building
Organizational branding
Brand identity over time
Managing the marketing mix

1. 1. Factual information

Module title	MKTG 303-Tourism e-business			
Module tutor		Level	6	
Module type	[e.g. taught, project, etc]	Credit value	15	
Mode of delivery	100% face-to-face			
Notional learning hours	Learning and teaching			
	Type of learning activity	Comprises	Hours	Weeks
	Timetabled contact:	Face to face delivery to include lectures and tutorials.	42	11
	Independent study:	Completion of day-to-day homework Preparation for submitting assessments. Study for Exams	108	12
		Total:	150	12

2. Rationale for the module and its links with other modules

Advances in technology have greatly influenced and shaped modern tourism operations. IT systems offer flexible, online and, above all, affordable, solutions for everyone, from single individuals to large companies. What is more important, online systems are used not only by industry professionals but by customers too; it is a given fact that a growing majority of tourists around the world use the internet to research, examine and select their next travel. As a result, it has become absolutely necessary that a professional of any position in tourism should be able to manage and run such platforms on a daily basis. There are hundreds of innovative and versatile platforms available for travel services, covering the needs of various segments, such as

2. Rationale for the module and its links with other modules

destination management companies, travel agencies, tour operators, hotels and hotel chains, tourist transfers and buses, excursions and package organizers etc.

During this course participants will be introduced to the basic characteristics of various e-business concepts, as well as industry-specific software, such as hotel booking, airline reservations, events registrations, as well as operational software covering areas of accounting, HR, logistics and dining services.

3. Aims of the module

- Introduction to e-Business and e-Commerce for tourism
- E-Marketplaces: structures and mechanisms
- Industry applications and electronic systems

4. Pre-requisite modules or specified entry requirements

N/A

6. Indicative content.

Internet and the World of Hospitality and Tourism.

Internet Revolution: History and Basics.

Internet as a Means of Communication, Commerce, Information Distribution, and Travel and Hospitality Research.

E-Marketing

Impact of the Internet on Travel and Hospitality Industry.

The Future of the Travel Agents and Intermediaries

1. 1. Factual information

Module title	MKT318 Global Marketing	Level	6
Module tutor	Konstantinos Rotsios	Credit value	15
Module type	Lectures and seminars		
Mode of delivery	100% face-to-face		
Notional learning hours			

2. Rationale for the module and its links with other modules

This course addresses marketing management problems, techniques and strategies needed to incorporate the marketing concept into today's global economy. More specifically, this fourth year course, provides students with the relevant knowledge to analyse and explain the international business environment and to develop suitable marketing strategies for companies that seek to expand their business in foreign markets. It is a required course for the concentration of Marketing and International Business and an elective for the rest of the concentrations.

3. Aims of the module

The course seeks to expand the knowledge of students in analyzing the international marketing environment by explaining thoroughly the key factors that affect it. Furthermore marketing principles and strategies are applied under a global perspective, by focusing on the similarities and acknowledging the differences of the international markets

4. Pre-requisite modules or specified entry requirements

Introduction to Management: MNGT 101, Introduction to Marketing: MKTG 101

6. Indicative content.

Analysis of external environments (economic-cultural-social-political-legal). Rationale for global expansion, where and how. Country markets selection process. Entry methods. Global competition and developed vs emerging countries. Global product, distribution, pricing and promotion strategies.

Indicative Weekly Content

1. The global marketing environment. From domestic marketing to international and global marketing
2. Global economy and trade liberalization. The balance of payments, the foreign currency market and macroeconomic indicators.
3. Cultural and social forces. The parameters that constitute cultural environment: language, religion, family, education, perceptions towards time, work & leisure etc. The Hofstede classification.
4. Political & legal forces. Rationale and potential actions of host countries governments. Home market pressure groups. Political risk assessment and protection.
5. Global markets and buyers – the consumer, the business and the government markets. Factors that affect their buying behavior
6. Global competitors: global vs global or global vs. local, - competition in developed & developing countries- country of origin effect
7. Global market Participation- reasons for going global- evaluating and country selection process. Screening process
8. Global market entry strategies – Exporting, licensing, franchising & Foreign Production- Ownership strategies: Joint Ventures and strategic alliances
9. Global Product strategies- rationale for product standardization vs adaptation- forces and types of product adaptations PLC and global product.
10. Branding Decisions. The global brand name process, groups of global customers
11. Pricing for Global markets – standardization or adaptation-Internal, Market, Environmental factors that affect pricing– Managerial issues: managing price escalations, transfer prices.
12. Managing Global distribution channels –foreign channel members- identifying, designing & managing global distribution channels
13. Global Promotion Strategies: pull vs push- personal selling- sales promotion-public relations. Standardization vs Adaptation. Global advertising: global vs local advertising campaigns- media strategy

1. 1. Factual information

Module title	Mkgt 320 Marketing Research		
Module tutor	Staff	Level	6
Module type	Lectures and seminars	Credit value	15
Mode of delivery	100% face-to-face		
Notional learning hours			

2. Rationale for the module and its links with other modules

The need for relevant accurate and timely information is at the core of marketing activity and primarily for strategy development. Marketing research course links all theoretical components of marketing to relevant data derived information. The meaningful and effective implementation of Marketing Theory is realized primarily in combination with effective Marketing Research implementation.

3. Aims of the module

To introduce the students to the needs of information regarding the marketing environment and the ways to investigate and learn how to provide qualitative and quantitative information through marketing research as to cover them. Also, to familiarize students with the marketing research tools and the use of the most appropriate as to meet research objectives in a valid and reliable way. To allow students to conduct and evaluate research projects.

4. Pre-requisite modules or specified entry requirements

Statistics I (STAT 205)

Indicative content.

- A The research process
 - Sources & types of information
 - Literature review
 - Reliability & Validity
- 1. Measurement methods & scales
 - Questionnaire development
 - Qualitative research & observation

Indicative content.
<p>Research designs Causal designs Sampling</p> <p>2. Sampling & coding How to do research on your own</p> <p style="padding-left: 40px;">Data analysis Descriptive statistics</p> <p>3. Statistical testing</p> <p>How to write a communicative report - Communicating findings and limitations</p>

1. 1. Factual information			
Module title	e-Marketing (MKTG 324)		
Module tutor		Level	6
Module type	Lectures and seminars	Credit value	15
Mode of delivery	100% face-to-face		
Notional learning hours	150 hours		

2. Rationale for the module and its links with other modules
<p>The cultural and technological changes that internet has brought to the possibilities for exchanges with the consumer has created not only a whole new set of ways of communication but also of product delivery, product creation, marketing research and group behaviour. These new capabilities and their consequences are the scope of this module.</p>

3. Aims of the module
<p>The module will introduce to the student all the key-practices a current marketer or executive needs to know to cope with the needs of e-marketing and e-business in small or large scale projects. The course will integrate the needs and parameters of physical space marketing with the ones of the digital environment.</p>

4. Pre-requisite modules or specified entry requirements
Introduction to Marketing (MKTG 101)

8. Indicative content.

intro to e-marketing

- e-mail marketing
- on-line advertising
- affiliate marketing
- search engine marketing & optimization
- ppc advertising
- social media
- social media as a tool for small business
- viral marketing
- on line reputation management and web pr
- web site design and development
- on-line copywriting
- web analytics and optimization
- m-marketing
- crm
- market research
- e-strategy
- adjusting campaigns to small business needs

Every assessment in every module has an associated threshold value (mark), which is set to 25 for all assessments. Students would need to achieve this minimum value (mark) in order to ensure that they have made a genuine attempt at each and every assessment.

In order to pass a module, the student has to:

1. Achieve a mark that is above threshold (25) in all assessments.
2. Have an overall weighted average in the module that is 40 or higher. In the case that the student fails to accomplish one of the above, they will need to re-sit the failed component and the re-sit results will be capped at 40 as per the current regulations.

Based on this for a piece of assessment, the student can:

1. 'Pass' the assessment: score 40 or better
2. 'Make a genuine attempt' at the assessment: score between 25 and 39
3. 'Fail' the assessment: score 24 or less

Cases 1 & 3 follow the current rules – pass and re-sit respectively. In case 2, if the student has an overall module average of 40 or better, they are seen to have met the associated learning outcomes of the module collectively to pass the module and do not have to re-sit the assessment

Module title	MARKETING 330, CONSUMER BEHAVIOUR		
Module tutor	Eirini Tsihla	Level	6
Module type	Lectures and seminars	Credit value	15
Mode of delivery	100% face-to-face		
Notional learning hours: 150			

2. Rationale for the module and its links with other modules

The marketing discipline and marketing activity is in theory and in practice should be customer centric and that means consumer centric. The marketing process and theory start with the consumer and end with the consumer. It starts with identifying needs all the way to post purchase satisfaction and loyalty. The purpose of this module is to complement the marketing process with the understanding of how a consumer decides and behaves.

3. Aims of the module

An analysis of consumer behavior, this module introduces students to the processes that consumers employ in order to select, purchase, use, evaluate, and dispose of products and services that will satisfy their needs. The module will also provide students with an understanding of the influences (external and internal) that determine consumer behavior. And, since consumers vary in the ways that they consume products and services, the module will demonstrate in various ways how and why the analysis of consumer behavior is critical to the field of marketing.

4. Pre-requisite modules or specified entry requirements

Introduction to Marketing

6. Indicative content.

- The social and market environment, The role of consumption in society
- Perception in consumer behavior
- The role of self-image in consumption
- Values and motivation
- Lifestyle
- Memory and learning
- Consumer attitude formation
- The cognitive and affective dimensions
- Individual decision making
- Household and group decision making
- Group influence and opinion leadership
- Culture and subculture
- Cultural change process and new consumers
- Group behaviour

1. Factual information

Module title	PRACTICUM 300 - Practicum		
Module tutor	Dr. Vagelis Chatzistavros	Level	6
Module type		Credit value	15
Mode of delivery	100% face-to-face		
Notional learning hours 150	The OU honours degrees conform to the current European qualifications framework. This indicates how the OU credit measures against the European credit transfer system (ECTS). In essence, 60 OU credit points are the equivalent of 30 ECTS points.		

2. Rationale for the module and its links with other modules

This is a level 6 major elective module which enables students to immerse themselves in real-life contexts, collaborate with community partners and mentors, and better understand the requirements of the community engagement and professional work, where relevant. There is a focus on reflexivity, problem-solving, communication skills development, critical thinking and writing.

3. Aims of the course

The module aims to offer students experiential and service-learning experiences which bring together knowledge acquired in various modules in their field of academic studies and its applications in diverse research and practice-based environments, such as the professional setting, education, not-for-profit, and the arts sector. As such, this placement module prepares students for further independent work and gives them hands-on experience of various professional fields, better equipping them for the job market.

4. Pre-requisite courses or specified entry requirements

None

6. Indicative content, learning activities and interactions

The module is a combination of classroom sessions and fieldwork / site placement. Students' projects depend on the nature of their placements. To start with, they fill in a skills and interests questionnaire, which helps to identify placements of relevance and interest out of the options available. This will be followed by interviews / informal discussions with organization staff where required.

During the first couple of weeks students will be acquainted with their placement sites and participate in a series of workshops and lectures delivered by the tutor and/or guest speakers on a variety of issues related to the practice of their subject area: from skills development (e.g. time management skills, team building, professional communication, adaptability and readiness at the workplace) to ethical issues in work, research and principles in community participation.

In the remainder of the term students will work on their placement projects. Location and schedules will be agreed jointly with their allocated mentors. The key principle underlying students' activities is the co-construction of knowledge through student-mentor-tutor collaboration. Such a participatory approach enables a shared, co-experienced understanding of the issues explored. Whilst the allocated mentors will support and guide students throughout, the latter are expected to demonstrate independent thinking, use of own initiative and responsiveness to the needs of the community / organization, so that they produce a piece of work that benefits them and falls within the aims and learning outcomes of their programme.

Further information about the placements, including ethical and academic considerations, is available on moodle / ACTivity and the module handbook.

Module title	Research 299 Business Research Methods		
Module tutor	Dr Konstantinos Rotsios Dr Eirini Tsihla	Level	5
Module type	Taught	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours: 150			

2. Rationale for the module and its links with other modules

The course introduces students to a diversity of research techniques and trains them in experiencing the research process that involves identifying, discussing and formulating research problems, selecting and applying appropriate research approaches and methods of inquiry (both qualitative and quantitative), collecting, analyzing, interpreting and reporting data, for the purpose of solving problems in the business environment. The students will become acquainted with the concept of research and its interplay between the business context and thesis work. The students will understand how to plan research work, develop a research proposal and finally undertake a research project. The course requires an active participation, independent study, an interest to start writing by following a certain methodology, and a high motivation for reading scholarly papers and relevant business information.

3. Aims of the module

The students will apprehend the main research strategies in social sciences, learn how to use theory, construct a literature review, articulate a selected problem driven and justified from the literature, select a sample and utilize different methods for collecting, analyzing, and interpreting research data. Learning outcomes include the following:

- Understand the main principles of research
- Develop an ability to evaluate secondary research documents and reports
- Apprehend the principles of qualitative and quantitative research methods
- Develop analytical and critical thinking skills that will be implemented in the students' research project
- Exercise writing skills and argumentation
- Develop communication skills

4. Pre-requisite modules or specified entry requirements

STAT 205-Statistics I

6. Indicative content.

- The basics of business and academic research
- The Business Research process
- Forming the Research Proposal
- Literature Review
- Use of Theory
- Ethical Considerations
- Secondary and primary data
- Qualitative and quantitative research
- Sampling

Proposal Submission

- Evaluation of proposals
- Statistical Background
- Data mining and data handling
- Writing the final paper
- Main analysis, conclusions and further research

Presentations and final paper submission

1. Factual information

Module title	STATISTICS 210 – Introduction to Statistics with R		
Module tutor	Dr. Mengoudi Kyriaki	Level	4
Module type	Taught: Lecture/discussion	Credit Value	15
Mode of delivery	100% face-to-face		
Notional learning hours 150			

2. Rationale of the course within the degree scheme/Prerequisites/other entry requirements

An application-oriented introduction to modern statistical analysis using R software that includes: study design, exploratory data analysis; random variables; probability models and sampling distributions; point and interval estimates; hypothesis tests and linear regression. A wide variety of applications are used.

3. Aims of the course

This course is an introduction to descriptive and inferential statistical methods. Students will master problem solving using both manual computations and R statistical software. The student will learn to formulate research questions, design data collection to answer the question, collect and analyse the data and interpret and report the results.

The course aims at the following:

- Give the student the statistical skills necessary to meet the needs of business and the real- world decision-making problems.
- Effectively communicate the results of a statistical analysis both orally and in writing.
- Provide fundamental statistical knowledge and skills required for a higher-level course in related fields.
- Analyze data using R software

4. Pre-requisite courses or specified entry requirements

Math 101

8. Indicative content.

Data and Statistics
Descriptive Statistics
Descriptive Statistics: Numerical Measures
Probability
Discrete Probability Distributions
Continuous Probability Distributions
Sampling Distributions
Interval Estimation
Hypothesis Testing
Linear Regression

8. STUDENT SUPPORT, GUIDANCE AND ADVICE

ACADEMIC ADVISING AND MENTORING

During the first 2 weeks of classes, students will be assigned the faculty member who will be their Academic Advisor for their first year at ACT and, in most cases, until graduation. The Academic Advisor helps students to plan their overall program of studies, as well as to select courses each semester. Advisors also provide information about ACT academic and support services, assist students in addressing problems in particular courses within a given semester, and offer ongoing advice concerning the students' long-term academic and career goals.

THE LEARNING HUB

ACT's Learning Hub is located on the upper floor of the Library. Students are invited to meet with the tutors and receive assistance with their English language and Mathematics needs. The Admissions and the Enrollment department offices are also located on the upper floor of the Library. Prospective students may obtain from there all the necessary information concerning their studies and financial support.

HEALTH SERVICES

The resident Anatolia High School nurse accepts student emergency visits as well as regular appointments in her office located on campus. The Anatolia/ACT is also within easy access to both a private clinic and several hospitals, all of which provide emergency services. A resident doctor at ACT is available to students on campus during the doctor's office hours.

9. OPPORTUNITIES FOR PERSONAL DEVELOPMENT PLANNING

CAREER SERVICES AND GUIDANCE

The Career Office equips students with the tools and know-how to successfully kickstart their careers. Specifically, we provide hands-on training on interviewing, resume & cover letter writing. The above are subsidized by guest lectures, which help students get an insight in their field of interest, and company visits, which give students the opportunity to meet company representatives and conduct informational interviews. The office also provides individual consultations in any career related issue, including job search tactics, career planning, resume preparation and mock interviews. Apart from this preparation stage, the career office offers internship and job opportunities, both in Greece and abroad, accessible to all students via the Career Office's job board (jobs.act.edu).

In addition, the Career Office also organizes the annual Career Week, a week-long event with lectures, company presentations, on-campus recruiting, networking opportunities and hands-on workshops.

The Office also serves as Liaison with the Business Community, and works actively with Industry and Academia to identify placement opportunities and keep students informed of local and regional trends.

Leading representatives from the private and public sectors visit ACT regularly as guest speakers in classes and events, reinforcing ACT's strong ties with companies, institutions and organizations throughout the local, national and international business environment.

INTERNSHIPS

The Career Office gives special emphasis to students' internships, both with local and international organizations. Every semester there is a visiting program with local organizations with internship opportunities, all relevant to the academic programmes and focusing on enhancing in-class learning. Apart from the on-campus recruiting, we coordinate a series of internship opportunities with organizations located in other cities or even abroad, either with on-site placement or remote work. The school's Job Board and Facebook Career Group help disseminate the internship opportunities, while the Career Workshops (resume writing, cover letter preparation, mock interviews) prepare students for claiming those opportunities.

10. OPPORTUNITIES AND SUPPORT FOR STUDY ABROAD

ACT STUDENTS STUDYING IN THE US

ACT has signed a number of study abroad exchange agreements with partner colleges and universities that enable students to spend a semester studying in the US. Through these agreements, ACT students may spend a semester, normally in their second or third year of study, at a college in the US, and upon return to ACT receive full transfer credit for all courses successfully completed while abroad. Agreements with partner schools allow ACT students to enroll at collaborating institutions while continuing to be enrolled at the home school and pay tuition and fees at ACT. Students are encouraged to look into study abroad opportunities early in their academic career with the director of the I.P.O. Good academic standing is a pre-requisite for considering such a possibility.

11. WORK PLACEMENT INFORMATION

A number of opportunities for personal development are available to English majors on demand and on a voluntary basis within the program, ranging from opportunities for joining extracurricular activities and clubs on campus, serving on the Student Government Association, engaging in Service Learning, acquiring information literacy and CV writing skills to building professional expertise through a term's Internship training in their senior year, thus enhancing self-reflection, PR and communication skills, personal and professional responsibility, learning how to meet deadlines and working with others, etc.

In addition, through ACT's Careers Office, targeted English-specific workshops, company visits and presentations further enhance opportunities for personal development. Short term internships have also been introduced. Here are some concrete examples:

- Communications & copywriting internship opportunities
- Resume, cover letter and interview workshops
- Private consultations for preparing individual students' resumes & cover letters.

- Mock interviews - private advising on interviewing
- Job board which renews weekly and includes - among others - internship and entry level opportunities in the field of communication.
- Guest lectures of professionals in the field (media, teaching, etc.)

The programme does not require students to undertake a compulsory work placement but there is the option of internship, if they wish to do so. Through the internship module students will be able to make visible connections between community service, their own learning, personal and professional development and citizenship skills, values and practices.

12. FACILITIES AND SERVICES

BISSELL LIBRARY - GENERAL INFORMATION

The Bissell Library offers a vast collection of books in print, electronic books, videos, and DVDs. Already one of the largest English language libraries in Greece, its collection is rapidly growing into a space designed to accommodate the institution's needs for years to come. The collection includes subscriptions to periodicals in hard copy as well as access to numerous full-text scholarly journals, magazines, and newspapers.

The Bissell Library offers, to currently enrolled students, on site and remote access to research databases to support inquiry and research. Business databases include Ebsco's Business Source Elite, Regional Business News, Hoover's, and ProQuest ABI Inform Global. Databases for research include: Academic Search Premier, E-books collection, Encyclopaedia Britannica, ERIC, GreenFILE, Columbia International Affairs Online (CIAO), JSTOR, Oxford English Dictionary and Oxford Music Online. We also subscribe to the Ebsco A-Z service, providing listing of all the electronic resources accessible from the library. The EBSCO Discovery Service TM brings together the most comprehensive content providing to users an easy, yet powerful means of accessing all of the library's information resources through a single search.

The Bissell Library shares an integrated library management system with the Socrates Eleftheriades and Olga Mavrophidou-Eleftheriades Library of Anatolia College. Access to both collections is available through the web-based library catalog. Library users can search the catalog, databases or the Internet through public access terminals available on both floors of the library. Network ports are available for laptops and the entire building is Wi-Fi enabled.

COMPUTING SERVICES & NETWORKING FACILITIES

ACT has state of the art computer infrastructure and facilities. All computer facilities are connected to a high-speed campus network, which is based on fiber optic cables connecting all buildings. In addition a large high speed wireless network access (WI-FI) covers large areas of the campus giving students the ability to use the school's resources or access the internet on their laptop.

The computer facilities include the Stavros S. Niarchos Technology Center in Bissell Library and a number of other computer laboratories located in various buildings. Many high-speed servers are present in the

network infrastructure, along with Intel® Core™ latest technology workstations, connected to the Internet, available to students in multiple laboratories.

The laboratories are used both as general access and instructional computer labs. They are equipped with data projectors and black and white or color laser printers. All stations are networked with full Internet Access and run the latest software such as MS office, Oracle, Power-builder, Visible Analyst, Java, Visual Basic, 3-D Max, Adobe Photoshop, Adobe CS Production Studio Premium, Macromedia Studio, Macromedia Authorware, PanaView Image Assembler, Mathematica Player, Minitab, MathCad, Daedalus, etc.

SCIENCE LABORATORIES

All science courses are accompanied by laboratory work. The purpose of the laboratories offered is to expose students to hands-on experience regarding concepts and principles learned in classroom. The College's new Science Facilities are located in the ground floor of Constantinidis Hall. The facilities include three laboratories (Biology/Ecology, Physics, Chemistry) covering a total area of 300 square meters.

FOOD SERVICES

The ACT Cafe, rented on a contract to a professional food service provider, is also located in the Constantinidis Hall and operates weekdays from 10:00 - 18:30 (Fall - Spring semesters) and 11:00 - 14:00 (Summer term—hours flexible) when classes are in session. The cafe offers an assortment of cold and hot sandwiches, coffee, salads and beverages.

HOUSING

ACT housing is available on a first come, first served basis and priority is always given to freshmen. Apartments are all shared and have both single and double rooms, common area, kitchen and bathroom. All interested students must complete a Housing Application in order to be considered for on-campus housing.

The Student Services Coordinator will assist students in locating off-campus housing in local residential areas. A list of trusted real estate agencies and property owners who speak English will be made available for interested students. ACT does not have any official relationship with housing agencies and does not endorse any specific agency. With all off-campus housing, students are responsible for personally contracting with the landlord but ACT will provide guidance and assistance. Regular announcements about available flats around the city are made on the ACT housing Facebook group. Students can also refer to this Facebook group in order to find roommates or shared housing.

13. DETERMINATION OF RESULTS (LINK TO OU REGULATIONS)

MINIMUM REQUIREMENTS FOR PASS

To obtain an Open University award students are required to complete all parts of the programme's approved assessment and comply with all regulations relating to their programme of study.

The minimum aggregate pass marks for The Open University validated awards are:

- 40% for undergraduate programmes
- 50% for postgraduate programmes

These minima apply to assessments, modules, stages and qualifications.

DETERMINING MODULE OUTCOMES

The overall module mark or grade shall be determined as set out in the assessment strategy detailed in the module specification and published in the Programme Handbook.

A student who passes a module shall be awarded the credit for that module. The amount of credit for each module shall be set out in the programme specification and published in the Programme Handbook.

In order to pass a module a student must achieve the requirement of the module as set out in the module specification and published in the Programme Handbook.

Where a student is registered only for a module (rather than a qualification) the resit will apply.

BACHELOR HONOURS DEGREE CLASSIFICATION

Classification of bachelor degrees will be based on the average mark across all modules within Stage 3 (usually Credit Level 6) and Stage 2 (usually Credit Level 5) at a ratio of 2:1 respectively unless the requirements of a Professional, Statutory and Regulatory Body (PSRB) state otherwise.

Honours degrees are classified as:

- First class Aggregate mark of 70% or above
- Upper Second class Aggregate mark between 60% and 69%
- Lower Second class Aggregate mark between 50% and 59%
- Third class Aggregate mark between 40% and 49%

Where students have directly entered a Qualification Level 6 top-up award (e.g. having previously undertaken a Higher National Diploma (HND) or Foundation Degree (FD) award) the calculation for the honours classification will be based solely on all credits at Credit Level 6.

Performance in work for which an award of credit for prior learning has been made is not taken into account in the calculation of the final award.

Where the final result of the classification calculation creates a mark of 0.5% or greater this will be rounded up to the next full percentage point (e.g. 69.5% is rounded to 70%; 59.5% to 60%; and so on). Where the calculation creates a mark below 0.5% this will be rounded down to the next full percentage point (e.g. 69.4% is rounded to 69%; 59.4% to 59%; and so on). For the purposes of rounding up or down, only the first decimal place is used.

14. **ASSESSMENT AND PROGRESSION REGULATIONS** ([LINK TO OU REGULATIONS](#))

SUBMISSION OF ASSESSED WORK

Work submitted for a summative assessment component cannot be amended after submission, or re submitted.

Student requests for extensions to assessment deadlines will not be approved unless made in accordance with published partner institution guidelines as approved by The Open University.

Where coursework is submitted late and there are no accepted extenuating circumstances it will be penalized in line with the following tariff:

Submission within 6 working days: a 10% reduction for each working day late down to the 40% pass mark and no further.

Submission that is late by 7 or more working days: submission refused, mark of 0. A working day is defined by the partner and submission after the deadline will be assumed to be the next working day.

ASSESSMENT SCORES

All undergraduate assessment will be marked on a percentage scale of 0-100.

% Scale Score	Performance Standard
70+	Excellent pass
60-69	Very Good pass
50-59	Good Pass
40-49	Pass
0-39	Fail

The final grade for an individual assessment component will be determined after completion of a quality assurance process (e.g. moderation, remarking) as detailed in the partner institution's OU approved policy for moderation.

Where the result of the assessment calculation creates a mark of 0.5% or greater this will be rounded up to the next full percentage point (e.g. 69.5% is rounded to 70; 59.5% to 60%; and so on). Where the calculation creates a mark below 0.5% this will be rounded down to the next full percentage point (e.g. 69.4% is rounded to 69%; 59.4% to 59%; and so on). For the purposes of rounding up or down, only the first decimal place is used.

DETERMINING PROGRESSION AND QUALIFICATION OUTCOMES

The paths through which students are required to progress through the programme, and the elements identified as compulsory or optional, are set out in the programme specification and approved in the validation process.

Pathways through any programmes offered by partner institutions may require students to complete prerequisite or co-requisite modules.

STAGE REQUIREMENTS

Each of the stages of an undergraduate programme is expected to consist of a total of 120 credits.

In cases where Programmes are not divided into stages (for example, most postgraduate programmes and undergraduate programmes of 120 credits or less) the provisions below apply to the whole programme.

In order to complete and pass a stage of a programme, a student must acquire the total credit set out in the programme specification at the approved qualification level for the award, or have been exempted through advanced standing, or through the implementation of the processes covering extenuating circumstances (see Section F).

The credit value of each module contributing to a stage determines its weighting in the aggregation of credit for a stage.

Where a student fails a module, the following may apply in the first instance:

- Resit, a second attempt at an assessment component following a failure at first attempt.
- Compensation, the award of credit by the Board of Examiners for a failed module(s) on account of good performance in other modules at the same credit level where the learning outcomes have been met.

RESIT PROVISION

Resit provision is subject to all the following conditions:

- The maximum number of retakes allowed in a programme leading to an Open University award is 10.
- A student who does not complete the resit by the date specified shall not progress on the programme, except in cases where the process for allowing extenuating circumstances has been followed.

- Resits can only take place after the meeting of the Board of Examiners or following agreement by the Chair and the External Examiner of the Board.
- A student who successfully completes any required resits within a module shall be awarded the credit for the module and the result capped at the minimum pass mark for the module.

15. DISSERTATIONS AND PROJECTS

HOW THE BISSELL LIBRARY SUPPORTS STUDENTS WITH THEIR THESES

The Bissell library in its effort to compliment and facilitate the educational process and the curriculum, always strives to provide the best services possible safeguarding that all students across all Divisions receive the same learning experience and support, as well as fair access to all available resources and services. More specifically when it comes to the writing up stage of their theses, the Bissell Library provides the following Resources and Support Services.

Resources :

- A collection of thesis writing books, academic writing and general study skills. This collection is housed in the Learning Hub
- Subject guides corresponding to the Divisions also provide a thematic information gateway of trustworthy information resources (e-journals, databases, etc.) to assist students in their quest for information gathering for their theses.
- The website of the Library, attempts to familiarize and provide introductory guidance on how to use various online tools such as Zotero, EasyBib and Diigo, which can become indispensable tools when it comes managing information and bookmarks, and citing resources.
- Guides have been composed to assist students with the OU Harvard referencing style (available on the library website)
- The Library in conjunction with all Divisions has streamlined the procedure of gathering all theses so as to develop in the near future an Institutional Repository. In the meantime students can drop in any time and can have access to study good examples of theses on site.
- Last but not list a plethora of printed material in a variety of subjects is also available to students.
- The students are able to ask for Interlibrary loans of journal articles we do not have online access to. The service is provided by the British Library. They are also able to suggest books relevant to their research to the library to buy.

Support Services:

- The Learning Hub strives to help students to become strong, independent learners through a variety of services. The assistance stretches through all stages of the learning process whether it is revising thesis writing, math, reading, or just refining those digital skills. Consultation is offered on one to one basis on prearranged meetings, or drop in sessions, as well as via e-mail.
- The allocation of two Academic Liaison Librarians as well as Division Academic staff reps allow for better communication among students, academic staff and the Library. This helps students and academic staff to convey in a more efficient manner their needs to the Library.
- Information Literacy lessons conducted by the Academic Liaison Librarians offer students a reminder of research, evaluation and referencing skills to support them in their project. This come as a continuation of previous Information literacy teaching offered in the previous years of study,

more specifically in English 101 which includes 6-Information literacy sessions. These sessions include: techniques on how to locate formal and informal information sources on subjects, evaluation of resources, plagiarism and paraphrasing, and referencing.

- Finally the Academic Liaison Librarians provide one to one support on how to search, evaluate and locate materials and referencing, either in drop in sessions or after appointments.

16. **OTHER INSTITUTIONAL POLICIES AND REGULATIONS** ([LINK TO OU REGULATIONS](#))

ACADEMIC MISCONDUCT

Academic misconduct is defined as any improper activity or behavior by a student which may give that student, or another student, an unpermitted academic advantage in a summative assessment. In investigating and dealing with cases of suspected misconduct, partner institutions will follow the policies and processes approved at Institutional approval or review.

The following is a non-exhaustive list of examples of academic misconduct which will be considered under these Regulations:

- **Plagiarism:** representing another person's work or ideas as one's own, for example by failing to follow convention in acknowledging sources, use of quotation marks, etc. This includes the unauthorized use of one student's work by another student and the commissioning, purchase and submission of a piece of work, in part or whole, as the student's own.

Note: Where a student has an acknowledged learning disability, a proof-reader may be used to ensure that the student's meaning is not misunderstood as a result of the quality and standard of writing, unless a partner institution policy specifically prohibits this. Where permitted, a proof-reader may identify spelling and basic grammatical errors. Inaccuracies in academic content should not be corrected nor should the structure of the piece of work be changed.

- **Collusion:** cooperation in order to gain an unpermitted advantage. This may occur where students have consciously colluded on a piece of work, in part or whole, and passed it off as their own individual efforts or where one student has authorized another to use their work, in part or whole, and to submit it as their own.

Note: legitimate input from tutors or approved readers or scribes is not considered to be collusion.

- **Misconduct in examinations** (including in-class tests).

ACADEMIC OFFENCES

An academic offence (or breach of academic integrity) includes any action or behavior likely to confer an unfair advantage, whether by advantaging the alleged offender or by disadvantaging another or others. Examples of such misconduct are plagiarism, collusion, cheating impersonation, use of inadmissible material and disruptive behavior. Responsibility for reviewing breaches of academic integrity is held by the college's Academic Standards and Performance Committee (AS & PC).

Charges against a student for violating academic integrity may originate from any source: a faculty member, an administrator, a staff member, a fellow student, or from the community at large. The charges are to be submitted in writing to the chair of the AS&PC. If a member of the Committee originates the charge, then that member will be excluded from the decision-making process, and any other process related to the case.

On receipt of the allegation of a breach of academic integrity, the Chair of the AS&PC must inform the Chair of the Board of Examiners that is responsible for the assessment of the course(s) that are affected by the alleged offence. The Board should then suspend its decisions on the candidate's grade(s) until the facts have been established.

The AS&PC will either itself investigate the charge or establish from its own membership a panel to conduct the investigation. In establishing whether a breach of academic integrity has occurred, the Committee (or panel) should consider oral and/or written evidence supplied by the individual(s) making the charge and the alleged offender. The alleged offender shall have the right to appear before the Committee (or panel).

Once the AS&PC has considered the allegation and reached a conclusion on whether an offence has occurred, it should issue a report with a recommendation regarding the outcome for the student to the Chair of the relevant Board of Examiners. If it has been established that an offence has occurred, the Board will judge the significance of the misdemeanor and exercise its discretion as appropriate to the case. If it is established that a student has attempted to gain an unfair advantage, the examiners shall be given the authority to rule that the student has failed part or all of the assessments, and the authority to determine whether or not the student should be permitted to be reassessed.

Independently on the assessment decisions made by the Board of Examiners, the AS&PC is empowered to consider a wider range of sanctions that might be applied when a student is found guilty of a breach of academic integrity. The following list of sanctions is indicative and can be imposed by majority vote of the Committee:

- **Admonishment Letter (or Letter of Warning):** The student is advised in writing that her/his behavior violates rules of academic and/or personal integrity and that a recurrence will lead to more serious sanctions. The Committee will deliberate on whether the letter should or should not appear in the student's file permanently or for a lesser period of time.
- **First Offense File:** The student's name and a description of the offense is filed in a shared electronic folder, accessible by the Provost, department chairs and area coordinators. Second offenses automatically result in a hearing.
- **Disciplinary Probation:** The student is advised in writing that his/her behavior violates rules on academic and/or personal integrity and is given a probationary period (to be decided upon by the Committee) to show by good behavior that a more stringent penalty should not be imposed. During the period of the probation, the student is required to terminate association with all extra-curricular activities and resign from any student office.
- **Suspension:** The student's relationship with the College will be discontinued until the end of the semester or term. The student will forfeit any fees involved with the College.

- Dismissal: The student's relationship with the College will be terminated indefinitely. The right to apply for re-admission shall be denied.

Within five working days of receipt of the decision, either party (plaintiff or student) has the right to make a formal written appeal against the decision of the Committee. The appeal is addressed first to the AS&PC. If the Committee does not deem any change to the decision is warranted subsequent to consideration of the appeal, the appeal may then be brought to the Academic Council, and subsequently to the President whose decision is final.

EXTENUATING CIRCUMSTANCES

The Open University recognizes that students may suffer from a sudden illness, or other serious and unforeseen event or set of circumstances, which adversely affects their ability to complete an assessment, or the results they obtain for an assessment. In such cases the partner institution's extenuating circumstances procedures will be applied, as approved in institutional review.

A student who is prevented from attending or completing a formal assessment component or who feels that their performance would be (or has been) seriously impaired by extenuating circumstances, may submit a deferral request to the AS&PC.

MITIGATING CIRCUMSTANCES

The following regulations distinguish between factors or circumstances which were known to the student in advance of taking an assessment and which affect his or her ability to attend an examination or submit work by the published deadline, and those which have not impaired the student's ability to attend for examination or meet a deadline for the submission of work but which may have affected his or her performance. In all cases, it is the responsibility of the student to ensure the timely disclosure of any factors or circumstances which may affect the assessment of his or her learning and responsibility for the consideration of these factors and circumstances will lie with the AS&PC.

Students whose circumstances may affect (or may have affected) their ability to meet a program's assessment requirements must submit a completed Mitigating Circumstances Extension Form together with verifiable documentation to the Registrar's Office. This form can be completed electronically or in person and may, if necessary, be signed retrospectively.

In the case of factors or circumstances which were known to the student in advance of taking an assessment and which affect his or her ability to attend an examination or submit work by the published deadline:

- the AS&PC will consider the evidence submitted by the student;
- if the mitigating circumstances are accepted by the Committee it will determine the extension to be granted to the student or, in the case of examinations, the date on which the student shall be assessed; in such cases the grades will not be capped at 40%.

- the Chair of the Board of Examiners, the Registrar and the appropriate department head/area coordinator will be informed of the Committee's decision.
- The student will have the right to apply for a further extension, or for a rescheduling of an examination, if the mitigating circumstances persist.

In the case of factors or circumstances having prevented a student from attending for examination or meeting a deadline for the submission of work but which may have affected his or her performance:

- the AS&PC will review the evidence submitted by the student and make a recommendation for consideration by the appropriate Board of Examiners;
- the Board of Examiners is responsible for considering that action that it should take in the light of the recommendations of the AS&PC;
- the actions available to the Board of Examiners include: the deferral of an assessment to a later date; compensation for the failure in a course; agreement that the student should either retake the course or be reassessed with the grade achieved being recorded in the student's transcript and therefore contributing to the classification of the award; and, exceptionally a decision that the student be assigned a higher grade for the course or courses on which his or her performance has been affected.

Students are responsible for ensuring that the partner institution is notified of any extenuating circumstances at the time they occur and for supplying supporting documentation by the published deadline.

If a student is unable to attend an examination or other assessment event because of extenuating circumstances, they must inform the Partner institution as soon as possible and provide supporting evidence before published deadlines or within 7 calendar days, whichever is sooner. If a student cannot submit evidence by published deadlines, they must submit details of the extenuating circumstances with an indication that evidence will be submitted within 7 calendar days.

Medical evidence submitted in support of a claim for extenuating circumstances should be provided by a qualified medical practitioner.

Upon receipt of recommendations from the panel or body responsible for investigating extenuating circumstances, the Board of Examiners, or its subsidiary board, will decide whether to:

- provide a student with the opportunity to take the affected assessment(s) as if for the first time i.e. a 'sit' or 'submit', allowing them to be given the full marks achieved for the examination or assessment, rather than imposing a cap;
- waive late submission penalties;
- determine that there is sufficient evidence of the achievement of the intended learning outcomes from other pieces of assessment in the module(s) for an overall mark to be derived;
- note the accepted extenuation for the module(s) and recommend that it is taken into account at the point of award and classification.

The Board of Examiners, depending on the circumstances, may exercise discretion in deciding on the particular form any reassessment should take. Options are a viva voce examination, additional assessment tasks designed to show whether the student has satisfied the programme learning outcomes,

review of previous work, or normal assessment at the next available opportunity. The student will not be put in a position of unfair advantage or disadvantage: the aim will be to enable the student to be assessed on equal terms with their cohort.

The module marks released following the meeting of the Board of Examiners should clearly identify results where extenuation has been considered and applied.

If a student fails, without good cause, to provide the responsible body with information about extenuating circumstances within the timescales specified in the partner institution policy, the responsible body has authority to reject the request on those grounds.

17. STUDENT PARTICIPATION AND EVALUATION

STUDENT PARTICIPATION

A member of the Student Government Association (SGA) must be present at all meetings of the Academic Standards and Performance Committee (ASPC) of the college, and participate in the discussions and voting for all cases examined. Furthermore, there are scheduled weekly meetings between the Associate Dean of Students and the SGA, where students present their views on the operation and development of the College. In addition, ACT may invite students to Academic Council meetings, where they can express their views and opinions to the top-level administration. The SGA is also involved in co-organizing major on-campus events.

MODULE EVALUATION

Module evaluation is conducted through the student evaluation forms. These forms measure the teaching quality and assessment methods, learning materials, delivery methods, course objectives, thought-provoking activities, comprehension of the subject matter, grading, degree of intellectual challenge and stimulation and draw comparisons with other courses.

The collection of student feedback is made at the office of the Associate Dean of Students, who has the general overview of the procedure. Then, modules are classified according to the programme they belong, and the feedback is sent to the corresponding department head. The results are also forwarded to the individual instructors. The outcomes of module evaluations are discussed between the Associate Dean for Academics and the department heads, and also in the departmental meetings of all divisions. In all these meetings, measures that need to be taken to improve student experience in future offerings of the modules are discussed.

COLLEGE-WIDE FEEDBACK

At the college level, ACT is administering another survey to measure both educational and other aspects of student life and behaviors. The survey, named College Student Experiences and Learning Outcomes

(CSELOA) is aiming at measuring self-perceptions of students and has two parts. The first part measures student learning outcomes and the second measures student behaviors and experiences. The questionnaire includes a diverse spectrum of variables relating to academics, faculty, student services, student-to-student and student-to-faculty interactions, sense of community, use of campus facilities, academic skills, communication, after-college preparation for graduate studies or work, and off campus study and life behaviors.

18. GENERAL READING LIST (NOT MODULE SPECIFIC). INCLUDING ELECTRONIC RESOURCES

- Fundamentals of data structures in C++ /; Horowitz, Ellis; 1995; Bissell Library, General Stacks (005.73 HOR)
- Cryptography's role in securing the information society / Kenneth W. Dam and Herbert S. Lin, editors.; 1996; Bissell Library, General Stacks Upper Level (652.8 CRY)
- Data structures and algorithms /; Aho, Alfred V.; 1983; Bissell Library, General Stacks (005.73 AHO)
- Fundamentals of computer algorithms /; Horowitz, Ellis; 1978; Bissell Library, General Stacks (519.4 HOR)
- Web-teaching : a guide to designing interactive teaching for the World Wide Web /; Brooks, David W.; 1997; Eleftheriades Library (025.06 BRO)
- Principles of database and knowledge-base systems /; Ullman, Jeffrey D.; 1988; Eleftheriades Library (005.74 ULL)
- Research methods in political science : an introduction using MicroCase.; Corbett, Michael.; 2003; Bissell Library, Reference Desk (320.0285 COR)
- Young scientist.; 1999; Eleftheriades Library (CD 503 YOU)
- Understanding information systems : what they do and why we need them /; Ratzan, Lee; 2004; Bissell Library, East Wing (LSDC 020 RAT)
- Information management using dBase /; Yerkey, A. Neil; 1991; Eleftheriades Library (025.3 YER)
- Encyclopedia of job-winning resumes /; Fournier, Myra.; 2006; Bissell Library, General Stacks Upper Level (650.14 FOU)
- Object-oriented programming in architecture; 1999; Bissell Library, Staff Office (VC 005.26 OBJ)
- Global software programmers; 1999; Bissell Library, Staff Office (VC 005.26 GLO)
- StudyWorks! for science / Mathsoft; 1986; Eleftheriades Library (CD 503 STU)
- Consider a spherical cow : a course in environmental problem solving /; Harte, John; 1988; Bissell Library, General Stacks (363.7 HAR)
- Computer images /; 1986; Eleftheriades Library (006.6 COM)
- Object-oriented client/server application development using ObjectPAL and C++ /; Ayer, Steve J.; 1995; Bissell Library, General Stacks (005.758 AYE)
- Mind tools : the science of artificial intelligence /; Bortz, Alfred B.; 1992; Eleftheriades Library (006.3 BOR)
- Computationalism : new directions /; 2002; Bissell Library, General Stacks (004 COM)
- Toward autonomous, adaptive, and context-aware multimodal interfaces : theoretical and practical issues : third COST 2102 International Training School Caserta, Italy, March 15-19, 2010 : revised selected papers /; 2011; Bissell Library, General Stacks (004.019 COS)
- Learning PHP, MySQL & JavaScript : with jQuery, CSS & HTML5 /; Nixon, Robin; 2015; Bissell Library, Reference Desk (005.2762 NIX)
- Object-oriented programming in the arts; 1999; Bissell Library, Staff Office (VC 005.26 OBJ)

- Cite right : a quick guide to citation styles--MLA, APA, Chicago, the sciences, professions, and more /; Lipson, Charles; 2006; Bissell Library, East Wing (LSDC 808.027 LIP)
- Sets, logic and maths for computing /; Makinson, David; 2012; Bissell Library, General Stacks (004.01 MAK)
- Electronic payment systems for e-commerce /; O'Mahony, Donal; 2001; Bissell Library, General Stacks (332.1028 O'MA)
- Data structures and problem solving using Java /; Weiss, Mark Allen; 2002; Bissell Library, General Stacks (005.133 WEI)
- Java design : objects, UML, and process /; Knoernschild, Kirk; 2002; Bissell Library, General Stacks (005.133 KNO)
- Data structures, algorithms, and applications in Java /; Sahni, Sartaj; 2000; Bissell Library, General Stacks (005.74 SAH), Bissell Library (005.74 SAH)
- Java the UML way : integrating object-oriented design and programming /; Lervik, Else; 2002; Bissell Library, General Stacks (005.133 LER)
- An introduction to object-oriented programming with Java /; Wu, C. Thomas; 2001; Bissell Library, General Stacks (005.133 WU), Bissell Library (005.133 WU)
- Physics for computer science students : with emphasis on atomic and semiconductor physics /; Garcia, Narciso,; 1991; Bissell Library, General Stacks (530 GAR)
- Encyclopedia of computer science and technology /; Henderson, Harry; 2003; Bissell Library, Reference Stacks (R 004.03 HEN)
- Essential discrete mathematics for computer science /; Feil, Todd; 2003; Bissell Library, General Stacks (004.01 FEI)
- Invitation to computer science /; Schneider, G. Michael; 2013; Eleftheriades Library, General Stacks (004 SCH)
- Fundamentals of discrete math for computer science : a problem-solving primer /; Jenkyns, T. A.; 2013; Bissell Library, General Stacks (004.01 JEN)
- GRE : practicing to take the computer science test.; 1997; Bissell Library, General Stacks (004.071 GRE)
- Computing tomorrow : future research directions in computer science /; 1996; Bissell Library, General Stacks (004.072 COM)
- Concrete mathematics : a foundation for computer science /; Graham, Ronald L.; 1994; Eleftheriades Library (510 GRA)
- Discrete Mathematics /; Graham, Ronald L. ;2011; Eleftheriades Library, General Stacks (510 GRA)
- Thesis projects : a guide for students in computer science and information systems /; 2008; Bissell Library, Reference Desk (004.072 THE)
- Pascal Algorithms : a Pascal-based introduction to computer science /; Reilly, Edwin D.; 1989; Bissell Library, General Stacks (005.262 PAS)
- Security systems and software; 1999; Bissell Library, Staff Office (VC 005.26 SEC)
- The computer : a very short introduction /; Ince, D.; 2011; Eleftheriades Library, General Stacks (004.16 INC)
- Eyewitness encyclopedia of science the essential multimedia reference guide to science and technology; 1994; Eleftheriades Library (CD 503 EYE)
- Java collections : an introduction to abstract data types, data structures, and algorithms /; Watt, David A.; 2001; Bissell Library, General Stacks (005.133 WAT)
- Fundamentals of data structures in Pascal /; Horowitz, Ellis; 1984; Bissell Library, General Stacks (005.262 PAS)
- Neural networks and fuzzy systems : a dynamical systems approach to machine intelligence /; Kosko, Bart; 1992; Bissell Library, General Stacks (006.3 KOS)

- The First Book of Information Science /; Becker, Joseph; 1973; Eleftheriades Library (004.09 BEC)
- Fuzzy sets, neural networks, and soft computing /; 1994; Bissell Library, General Stacks (006.3 FUZ)
- Partitioning data sets : DIMACS workshop, April 19-21, 1993 /; 1995; Bissell Library, General Stacks Upper Level (621.367 PAR)
- Cognitive vision systems : sampling the spectrum of approaches /; 2006; Bissell Library, General Stacks (006.37 COG)
- Creating successful software for your customer; 1999; Bissell Library, Staff Office (VC 005.26 CRE)
- The global network and object-oriented programming; 1999; Bissell Library, Staff Office (VC 005.26 GLO)
- The history of software; 1999; Bissell Library, Staff Office (VC 005.26 HIS)
- Object-oriented data structures using Java /; Dale, Nell B.; 2002; Bissell Library, General Stacks (005.133 DAL)
- Darwin among the machines /; Dyson, George; 1998; Eleftheriades Library (006.3 DYS)
- Data structures & algorithms in Java /; Lafore, Robert; 2003; Bissell Library, Reference Desk (005.73 LAF)
- In the image of the brain : breaking the barrier between the human mind and intelligent machines /; Jubak, Jim; 1992; Eleftheriades Library (006.3 JUB)
- Intelligent systems for finance and business /; 1995; Bissell Library, General Stacks Upper Level (658.0563 INT)
- Data structures in Java : a laboratory course /; Andersen, Sandra; 2002; Bissell Library, General Stacks (005.133 AND)
- JavaScript : the definitive guide /; Flanagan, David; 2002; Bissell Library, General Stacks (005.2762 FLA)
- Computer models for operations management /; Hall, Owen P.; 1993; Bissell Library, General Stacks Upper Level (658.5 HAL)
- Statistical principles of research design and analysis /; Kuehl, R. O.; 1994; Bissell Library, General Stacks (001.422 KUE)
- Theoretical models in biology : the origin of life, the immune system, and the brain /; Rowe, Glenn; 1994; Bissell Library, General Stacks (570.0113 ROW)
- Simulating neural networks with Mathematica /; Freeman, James A.; 1994; Bissell Library, General Stacks (006.3 FRE)
- The Internet for scientists and engineers : online tools and resources /; Thomas, Brian J.; 1996; Bissell Library, General Stacks (004.67 THO)
- HAL's legacy : 2001s computer as dream and reality /; 1997; Bissell Library, General Stacks (004.HAL)
- Software engineering with B /; Wordsworth, J. B.; 1996; Bissell Library, General Stacks (005.133 WOR)
- Compiler construction /; Wirth, Niklaus; 1996; Bissell Library, General Stacks (005.453 WIR)
- The F programming language /; Metcalf, Michael; 1996; Bissell Library, General Stacks (005.133 MET)
- Principles of artificial intelligence and expert systems development /; Rolston, David W.; 1988; Bissell Library, General Stacks (006.3 ROL)
- The art of computer programming; Knuth, Donald Ervin; 1973; Bissell Library, General Stacks (005.1 KNU)
- Object-oriented programming via Fortran 90/95 /; Akin, J. E.; 2003; Bissell Library, Reference Desk (005.133 AKI)

- The elements of UML style /; Ambler, Scott W.; 2003; Bissell Library, General Stacks (005.117 AMB)
- Programming with objects : a comparative presentation of object-oriented programming with C++ and Java /; Kak, Avinash C.; 2003; Bissell Library, General Stacks (005.133 KAK)
- Memory as a programming concept in C and C++ /; Franek, F.; 2004; Bissell Library, General Stacks (005.435 FRA)
- Game architecture and design /; Rollings, Andrew; 2004; Bissell Library, General Stacks (005.26 ROL)
- Algorithms /; Sedgewick, Robert ;1983; Bissell Library, General Stacks (519.4 SED)
- Virtual reality /; Rheingold, Howard; 1991; Eleftheriades Library (501.13 RHE)
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- Algorithmic information theory /; Chaitin, Gregory J.; 1987; Eleftheriades Library, General Stacks (004 CHA)
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- Artificial intelligence and intelligent systems /; Padhy, N. P.; 2005; Bissell Library, General Stacks (006.33 PAD)
- Affective, interactive and cognitive methods for e-learning design : creating an optimal education experience /; 2010; Eleftheriades Library, General Stacks (371.334 AFF)
- Engineering problem solving with C++ /; Etter, Delores M.; 2012; Bissell Library, Reference Desk (620.00285 ETT)
- Head first Java /; Sierra, Kathy; 2005; Bissell Library, New Books Area (005.133 SIE)
- Introduction to programming in Java : an interdisciplinary approach /; Sedgewick, Robert; 2014; Bissell Library, New Books Area (005.133 SED)
- Digital design and computer architecture /; Harris, David Money; 2013; Bissell Library, Reference Desk (621.381 HAR)
- Joomla! 3 beginner's guide /; Tiggeler, Eric; 2014; Bissell Library, Reference Desk (006.78 TIG)
- Would-be worlds : how simulation is changing the frontiers of science /; Casti, J. L.; 1997; Bissell Library, General Stacks (003.7 CAS)
- Thinking in complexity : the complex dynamics of matter, mind, and mankind /; Mainzer, Klaus; 1997; Bissell Library, General Stacks (501 MAI)
- Visions : how science will revolutionize the twenty-first century /; Kaku, Michio; 1998; Eleftheriades Library (501.72 KAK)
- The computer and the mind : an introduction to cognitive science /; Johnson- Laird, P. N.; 1988; Bissell Library, General Stacks (153 JOH)
- Decoding the universe : how the new science of information is explaining everything in the cosmos, from our brains to black holes /; Seife, Charles; 2006; Bissell Library, General Stacks (006.33 SEI)
- The innovators : how a group of inventors, hackers, geniuses, and geeks created the digital revolution /; Isaacson, Walter; 2014; Bissell Library, General Stacks (004.0922 ISA)
- Discrete mathematics /; Lipschutz, Seymour; 2007; Bissell Library, General Stacks (511.1 LIP)
- Objects first with Java : a practical introduction using BlueJ /; Barnes, David J.; 2012; Bissell Library, New Books Area (005.133 BAR)

- Cognitive behavioural systems : COST 2102 International Training School, Dresden, Germany, February 21-26, 2011 : revised selected papers /; 2012; Bissell Library, General Stacks (006.3 COG)
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- Mind design II : philosophy, psychology, artificial intelligence /; 1997; Bissell Library, General Stacks (006.3 MIN)
- The philosophy of artificial intelligence /; 1990; Bissell Library, General Stacks (006.3 PHI)
- The metaphorical brain 2 : neural networks and beyond /; Arbib, Michael A.; 1989
- The great interactive dream machine : another adventure in cyberspace /; Peck, Richard; 1996; Elementary Library (JUNIOR PECK)
- Virtual reality : computers mimic the physical world /; Grady, Sean M., 1998
- Neural networks and natural intelligence /; 1988; Bissell Library, General Stacks Upper Level (612.81 NEU)
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- Computational financial mathematics using Mathematica : optimal trading in stocks and options /; Stojanovic, Srdjan; 2003; Bissell Library, Reference Desk (332.63 STO)
- Imitation of life : how biology is inspiring computing /; Forbes, Nancy; 2004; Bissell Library, General Stacks (570 FOR)
- Evolutionary computation : a unified approach /; De Jong, Kenneth A.; 2006; Bissell Library, General Stacks (005.1DE)
- The Blackwell guide to the philosophy of computing and information /; 2004; Bissell Library, General Stacks (004.01 BLA)
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- Operating system concepts /; Silberschatz, Abraham; 2014; Bissell Library, Reference Desk (005.43 SIL)
- Projects in computing and information systems : a student's guide /; Dawson, Christian W.; 2015; Bissell Library, Reference Desk (004 DAW)
- Invent to learn : making, tinkering, and engineering in the classroom /; Martinez, Sylvia Libow; 2013; Eleftheriades Library, General Stacks (507.1 MAR)
- Research methodology : a step-by-step guide for beginners /; Kumar, Ranjit; 2014; Bissell Library, Reference Desk (300.72 KUM)
- Android application development cookbook : over 100 recipes to help you solve the most common problems faced by Android developers today /; Boyer, Rick; 2016; Bissell Library, Reference Desk (005.3 BOY)
- The thrilling adventures of Lovelace and Babbage : with interesting & curious anecdotes of celebrated and distinguished characters : fully illustrating a variety of instructive and amusing scenes; as performed within and without the remarkable difference engine /; Padua, Sydney; 2015; Eleftheriades Library, Fiction Stacks (GN PADUA)
- Ada Lovelace, poet of science : the first computer programmer /; Stanley, Diane; 2016; Elementary Library (510.92 STA)
- Ada Byron Lovelace and the thinking machine /; Wallmark, Laurie; 2015; Elementary Library (92 LOVELACE)
- Object-oriented methods : a foundation /; Martin, James; 1998; Bissell Library, General Stacks (005.12 MAR)
- Object-oriented modeling and design /; 1991; Bissell Library, General Stacks (005.1 OBJ)

- Systems analysis and design /; Kendall, Kenneth E.; 2002; Bissell Library, General Stacks (004.21 KEN)
- An introduction to object-oriented programming /; Budd, Timothy; 2002; Bissell Library, General Stacks (005.117 BUD)
- Lectures in e-commerce /; 2001; Bissell Library, General Stacks Upper Level (658.8 LEC)
- A first course in discrete mathematics /; Anderson, Ian; 2001; Eleftheriades Library (510 AND)
- Business information systems : analysis, design, and practice /; Curtis, Graham; 2002; Bissell Library, General Stacks Upper Level (658.4038 CUR)
- Fundamentals of neural networks : architectures, algorithms, and applications /; Fausett, Laurene V.; 1994; Bissell Library, General Stacks (006.3 FAU)
- The cognitive brain /; Trehub, Arnold; 1991; Bissell Library, General Stacks (153 TRE)
- Introduction to operations research /; Hillier, Frederick S.; 1995; Bissell Library, General Stacks Upper Level (658.4034 HIL)
- Discrete mathematics with algorithms /; Albertson, Michael O.; 1988; Bissell Library, General Stacks (510 ALB)
- Neural network time series forecasting of financial markets /; Azoff, E. Michael; 1994; Bissell Library, General Stacks (332.645 AZO)
- Robot vision /; Horn, Berthold; 1986; Bissell Library, General Stacks Upper Level (629.892 HOR)
- Learning algorithms : theory and applications in signal processing, control, and communications /; Mars, P.; 1996; Bissell Library, General Stacks Upper Level (629.8 MAR)
- A first course in fuzzy logic /; Nguyen, H. T.; 1997; Bissell Library, General Stacks (511.3 NGU)
- Corpus processing for lexical acquisition /; 1996; Bissell Library, General Stacks (006.35 COR)
- Distributed database systems /; Bell, D. A.; 1992; Bissell Library, General Stacks (005.74 BEL)
- Object-oriented database systems : concepts and architectures /; Bertino, Elisa; 1993; Bissell Library, General Stacks (005.74 BER)
- Object technology strategies and tactics /; Singer, Gilbert L.; 1996; Bissell Library, General Stacks (005.12 SIN)
- Discrete mathematics and its applications /; Rosen, Kenneth H.; 1991; Bissell Library, General Stacks (511 ROS)
- Introduction to formal languages /; Revesz, Gyorgy E.; 1991; Bissell Library, General Stacks (511.3 REV)
- Applied iterative methods /; Hageman, Louis A.; 1981; Bissell Library, General Stacks (519.4 HAG)
- Artificial intelligence : a beginner's guide /; Whitby, Blay,; 2003; Bissell Library, General Stacks (006.3 WHI)
- Artificial intelligence and natural man /; Boden, Margaret A.; 1977; Bissell Library, General Stacks (006.3 BOD)
- Cross-curricular word problems : developing children's problem-solving skills in the daily maths lesson.; Clarke, Peter,; 2010; Elementary Library, Reference Desk (510 CLA)
- Data made flesh : embodying information /; ; 2004; Bissell Library, General Stacks (306.4 DAT)
- Discrete mathematics : elementary and beyond /; Lovasz, Laszlo,; 2003; Bissell Library, General Stacks (510 LOV)
- Discrete mathematics demystified /; Krantz, Steven G.; 2009; Bissell Library, General Stacks (511.1 KRA)
- Discrete structures /; Fell, Harriet; 2017; Bissell Library, Reference Desk (511.1 FEL)
- E-Learning and the science of instruction : proven guidelines for consumers and designers of multimedia learning /; Clark, Ruth Colvin; 2003; Bissell Library, East Wing (FDC 658.3124 CLA)
- Essentials of discrete mathematics /; Hunter, David James,; 2012; Bissell Library, General Stacks (004.01 HUN)

- Expert systems : tools and applications /; Harmon, Paul; 1988; Bissell Library, General Stacks Upper Level (620.028 HAR)
- Guide to the successful thesis and dissertation : a handbook for students and faculty /; Mauch, James E.,; 2003; Bissell Library, Learning Hub (SSC 808.02 MAU)
- JavaScript : the definitive guide /; Flanagan, David; 1998; Bissell Library, General Stacks (005.2 FLA)
- Mathematics and physics for programmers /; Kodicek, Danny; 2005; Bissell Library, Reference Desk (510.24 KOD)
- Mobile applications development with Android : technologies and algorithms /; Qiu, Meikang; 2017; Bissell Library, Reference Desk (005.365 QIU)
- On intelligence /; Hawkins, Jeff; 2004; Bissell Library, General Stacks Upper Level (612.82 HAW)
- Privacy on the line : the politics of wiretapping and encryption /; Diffie, Whitfield; 1998; Bissell Library, General Stacks (342.730858 DIF)
- Programming with Microsoft Visual Basic 6.0 : an object-oriented approach ; comprehensive /; Ekedahl, Michael V.; 1999; Bissell Library, General Stacks (005.1313 VIS)
- Statistical mechanics of learning /; Engel, A.; 2001; Bissell Library, General Stacks (006.3 ENG)
- Technology supported learning and teaching : a staff perspective /; ; 2006; Bissell Library, General Stacks (371.33 TEC)
- The code book : the secret history of codes and code-breaking /; Singh, Simon; 2000; Bissell Library, General Stacks Upper Level (652.8 SIN)
- The wrong side of the galaxy /; Thomson, Jamie,; 2014; Elementary Library (JUNIOR THOMSON)
- UML xtra-light : how to specify your software requirements /; Kratochvil, Milan; 2003; Bissell Library, General Stacks (005.1 KRA) Bissell Library, General Stacks (005.1 KRA)
- Understanding search engines : mathematical modeling and text retrieval /; Berry, Michael W.; 2005; Bissell Library, East Wing (LSDC 025.04 BER)
- E-commerce and web technologies : 5th International Conference, EC-Web 2004, Zaragoza, Spain, August 31-September 3, 2004 : proceedings /; ; 2004; Bissell Library, General Stacks Upper Level (658.84 INT)
- The tools for successful online teaching /; Dawley, Lisa,; 2007; Bissell Library, Reference Desk (371.334 DAW)
- Data analysis using SQL and Excel /; Linoff, Gordon; 2008; Bissell Library, General Stacks (005.75 LIN)
- JavaScript & jQuery : interactive front-end web development /; Duckett, Jon; 2014; Bissell Library, Reference Desk (005.133 DUC)
- Neuromancer /; Gibson, William,; 1984; Bissell Library, Fiction Stacks (FIC GIBSON)
- Thing explainer : complicated stuff in simple words /; Munroe, Randall; 2015; Eleftheriades Library, General Stacks (500 MUN)
- Beginning PHP 5.3 /; Doyle, Matt; 2010; Bissell Library, Reference Desk (006.76 DOY)
- Android UI design : plan, design, and build engaging user interfaces for your Android applications; Thornsby, Jessica; 2016; Bissell Library, Reference Desk (005.437 THO)
- Design patterns : elements of reusable object-oriented software /; Gamma, Erich; 2016; Bissell Library, New Books Area (005.117 GAM)
- Adobe Photoshop CC for photographers : version 2015.5 : a professional image editor's guide to the creative use of Photoshop for the Macintosh and PC /; Evening, Martin; 2017; Bissell Library, General Stacks (006.696 EVE)
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- The hidden power of blend modes in Adobe Photoshop /; Valentine, Scott; 2013; Bissell Library, General Stacks (006.686 VAL)
- The cybercultures reader /; 2007; Bissell Library, General Stacks (303.4833 CYB)
- Doing a successful research project : using qualitative or quantitative methods /; Davies, Martin,; 2014; Bissell Library, Reference Desk (001.42 DAV)
- Applications of discrete mathematics /; 1991; Bissell Library, General Stacks (511.1 APP)
- The singularity is near : when humans transcend biology /; Kurzweil, Ray; 2005; Bissell Library, General Stacks (153.9 KUR)
- Στοιχεία διακριτών μαθηματικών /; Liu, C. L.; 2002; Eleftheriades Library, General Stacks (510 LIU)
- Quantitative methods for business decisions : with cases /; Lapin, Lawrence L.; 1994; Bissell Library, General Stacks Upper Level (658.4033 LAP)
- Ideas that changed the world; Ingpen, Robert R.; 1996; Eleftheriades Library (CD 609 ING)
- Fade to Blue : a novel /; Beaudoin, Sean; 2009; Eleftheriades Library, Fiction Stacks (YA BEAUDOIN)
- Blogs, wikis, podcasts, and other powerful Web tools for classrooms /; Richardson, Will; 2010; Eleftheriades Library, General Stacks (025.04 RIC)
- Calculus : early transcendentals /; Stewart, James,; 2012; Bissell Library, General Stacks (515 STE) Bissell Library, General Stacks (515 STE)
- Mona Lisa overdrive /; Gibson, William,; 1988; Bissell Library, Fiction Stacks (FIC GIBSON)
- Internet research skills /; Ó; 2012; Bissell Library, Reference Desk (025.04 ODO)
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- Digital media : concepts and applications /; Crews, Tena B.; 2017; Bissell Library, Reference Desk (006.7 CRE)
- 100 diagrams that changed the world : from the earliest cave paintings to the innovation of the iPod /; Christianson, Scott; 2012; Eleftheriades Library, General Stacks (608 CHR)
- Introduction to research methods : a practical guide for anyone undertaking a research project /; Dawson, Catherine; 2009; Bissell Library, Reference Desk (001.42 DAW)

Electronic resources (databases) added to our collections:

- ACM Digital Library which includes access to 45 journal titles for Computer Science among other resources
- Business Source Complete expanding the subscription of Business Source Elite to provide 2,725 more titles to support the Business Division