

COURSE OUTLINE

1. GENERAL

SCHOOL:	BUSINESS AND ECONOMICS		
DEPARTMENT	BUSINESS ADMINISTRATION		
DIVISION	TOURISM AND HOSPITALITY MANAGEMENT		
LEVEL OF STUDY	UNDERGRADUATE		
COURSE UNIT CODE	3102206	SEMESTER OF STUDY	2
COURSE TITLE	INTRODUCTION TO INFORMATICS AND COMPUTER PROGRAMMING		
COURSEWORK BREAKDOWN		TEACHING WEEKLY HOURS	ECTS Credits
Lectures, Workshops and Laboratory Exercises		4	4
COURSE UNIT TYPE	General Background Course		
PREREQUISITES :			
LANGUAGE OF INSTRUCTION/EXAMS:	GREEK		
COURSE DELIVERED TO ERASMUS STUDENTS	YES		
MODULE WEB PAGE (URL)	http://moodle.teipir.gr/course/info.php?id=78		

2. LEARNING OUTCOMES

Learning Outcomes
<p>The aim of the course is to introduce students to the scientific field of informatics and especially to computer programming. Students will learn the fundamentals of programming through a modern high level programming language which combines features of object-oriented programming and event-driven programming in a graphical user interface. The ultimate goal is for the students to understand the way in which a program leverages the underlying computer within the framework of the management of an organization.</p> <p>After completing this course, students will be able to:</p> <ul style="list-style-type: none"> • Explain the structure of a computing system • Explain the process of creating and executing a program in a computing system • Create small-scale programs to solve simple practical problems • Distinguish the role of both the functional part of a program and the part used to interface with the user • Use objects of the programming language and especially those for creating the graphical user interface of the application • Manage errors that may occur during the runtime of the application
General Skills
<ul style="list-style-type: none"> - Individual work - Teamwork - Search, analyze and synthesize data and information, and the use of essential technologies

3. COURSE CONTENTS

The course is organized around topics such as:

- Introduction to Informatics
- The Function of Computer
- Data Representation and Coding
- Algorithm and Program
- Introduction to Programming Language
- Flow Control of a Program
- Procedures and Functions
- Tables and Applications
- Files and Error Management
- Introduction to Object Oriented Programming
- Graphical User-Interface Objects
- Design of the Application

4. TEACHING METHODS - ASSESSMENT

MODE OF DELIVERY	In-Class	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY	Programming Language Software (Visual Basic.NET) Support of the learning process through the LMS platform of PUAS (Piraeus University of applied Science).#	
TEACHING METHODS	Method description	Semester Workload
	Lectures	26
	Laboratory Exercises	26
	Preparation of Group Project	10
	Independent and Directed Learning	38
	TOTAL	100
ASSESSMENT METHODS	<p>I. Final Examination (40%) (Summative Evaluation) includes:</p> <ul style="list-style-type: none"> - Multiple choice questions or true/false questions - Short answer questions - Solve simple problems <p><u>Evaluation Objective:</u> To understand the fundamentals of the course. <u>Evaluation Criteria:</u> Comprehensiveness, accuracy, and critical evaluation.</p> <p>II. Group Project (30%) (Summative): Students are asked to work in groups and develop small-scale programs in the Lab. Teacher assess the ability of students to give operational solutions. <u>Evaluation Objective:</u> To examine the ability to create simple programs to solve practical problems. <u>Evaluation Criteria:</u> The degree of use of the elements of the programming language, the functionality of the program, the quality of the given solution.</p> <p>III. Individual On-line Test (20%) (Summative): Students are asked to answer in 3 on-line tests with multiple choice questions at specific periods in the labs. <u>Evaluation Objective:</u> The degree of comprehension of the elements of the programming language.</p>	

	<p>IV. Individual On-line Test (10%) (Formative Evaluation) Concerns issues covered by lectures. The test is done on-line at the end of each topic through the Course Management System. Students are allowed to repeat the test more than 1 times.</p> <p><u>Evaluation Objective:</u> Examination of students' progress in relation to learning outcomes, feedback and fine tuning of the course lectures.</p> <p><u>Evaluation Criteria:</u> Comprehensiveness, accuracy, and critical evaluation.</p> <p>Evaluation criteria are explicitly referred on the site of the course for each learning activity.</p>
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5. RESOURCES

- Recommended Book and Journal Article Resources:

Books

- Halvorson Michael, (2010). *Microsoft Visual Basic 2010 Step by Step*, KLIDARITHMOS Publishing, Athens (in Greek)
- Deitel, Paul J., Deitel, Harvey M., (2010). *Visual Basic 2010 Programming*, GIOURDAS M., Publishing (in Greek)
- D. Kytagias, I. Psaromiligkos, (2004). *VISUAL BASIC Από τη Θεωρία... στην Πράξη*, DIROS Publishing (in Greek)
- Beekman, George, Quinn, Michael J., (2008). *Introduction to Informatics*, GIOURDAS M., Publishing, ISBN10: 9605125358 (in Greek)

Internet resources:

- Microsoft Visual Studio 2010 Express Edition
<http://www.visualstudio.com/en-us/downloads#d-2010-express>
- MSDN Library for Visual Studio 2010
[http://msdn.microsoft.com/en-us/library/dd831853\(v=vs.100\).aspx](http://msdn.microsoft.com/en-us/library/dd831853(v=vs.100).aspx)
- A Guide to Algorithm Development, Manos Karvounis, Department of Computer Science, University of Athens: <http://cgi.di.uoa.gr/~ip/Odigos.pdf>
- Ancient Greek Computer's Inner Workings Deciphered, National Geographic:
<http://news.nationalgeographic.com/news/2006/11/061129-ancient-greece.html>
- How to Design Programs - An Introduction to Computing and Programming, MIT Press:
<http://www.htdp.org/2003-09-26/Book/>
- MIT 6.00 Introduction to Computer Science and Programming, Fall 2008, Youtube Videos in:
<http://www.youtube.com/watch?v=k6U-i4gXkLM>

Selected articles from the following journals:

- Programming and Computer Software, Springer.
- Science of Computer Programming, Elsevier.
- Information and Software Technology, Elsevier.
- IEEE Transactions on Software Engineering, IEEE Computer Society.