COURSE OUTLINE

1. GENERAL

SCHOOL	BUSINESS AND ECONOMICS		
DEPARTMENT	BUSINESS ADMINISTRATION		
DIVISION	BUSINESS ADMINISTRATION		
LEVEL OF STUDY	UNDERGRADUATE		
COURSE UNIT CODE	**1102206**	**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

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.

After completing this course, students will be able to:

- 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

- 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

I. Final Examination (40%) (Summative Evaluation) includes:
- Multiple choice questions or true/false questions
- Short answer questions
- Solve simple problems

Evaluation Objective: To understand the fundamentals of the course.
Evaluation Criteria: Comprehensiveness, accuracy, and critical evaluation.

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.
Evaluation Objective: To examine the ability to create simple programs to solve practical problems.
Evaluation Criteria: The degree of use of the elements of the programming language, the functionality of the program, the quality of the given solution.

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.
Evaluation Objective: The degree of comprehension of the elements of the programming language.

	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. Evaluation Objective: Examination of students' progress in relation to learning outcomes, feedback and fine tuning of the course lectures. Evaluation Criteria: Comprehensiveness, accuracy, and critical evaluation. Evaluation criteria are explicitly referred on the site of the course for each learning activity.

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
- 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.