Course Syllabus

Course Code	Course Title	ECTS Credits
COMP-524DL	Visual Software Development	10
Prerequisites	**Department**	**Semester**
None	Computer Science	Fall, Spring
Type of Course	**Field**	**Language of Instruction**
Elective	Computer Science	English
Level of Course	**Lecturer(s)**	**Year of Study**
1st Cycle	Andreas Savva	2nd
Mode of Delivery	**Work Placement**	**Corequisites**
Distance Learning	N/A	None

Course Objectives:

The main objectives of the course are to:
- Introduce students to structured programming by means of the syntax and semantics of a structured high-level Visual Programming language.
- Provide students a good working knowledge of designing and programming Web and Windows applications using a Visual Programming language.
- Provide practical experience in writing code.
- Guide the student to handle code generation, user interface design, and testing and debugging in a Visual Programming language.
- Provide guidance in creating ASP.NET Web applications and process Web Forms.
- Guide the student to control Web site access with Web Forms authentication.
- Provide practical experience in building SQL Server databases and accessing them.
- Guide the student in order to develop good programming practices.

Learning Outcomes:

After completion of the course students are expected to be able to:
- Deal with the practicalities of writing a computer program.
- Think and plan in a logical manner.
- Apply a structured approach to problem solving.
- Analyze and explain the behaviour of programs involving the fundamental programming

constructs.
- Modify and expand programs that use standard conditional and iterative controls structures and functions.
- Design, implement, test and debug a program.
- Build classes and inheritance hierarchies.
- Write desktop and Web applications with Windows Forms and Web Forms.
- Construct and deploy custom .NET components.
- Implement data-query logic for databases using LINQ and EF.
- Accelerate development with the .NET Framework library.

Course Content:

1. Introduction to Programming and Visual C#
2. User Interface Design
3. Variables, Constants and Applications
4. Decisions and Conditions
5. Menus, Common Dialog Boxes and Methods
6. Multiform Projects
7. Lists and Loops
8. Arrays
9. Web Applications
10. Data Base Applications
11. Data Files
12. Object Oriented Programming

Learning Activities and Teaching Methods:

Presentations, Textbook Exercises, Online Exercises

Assessment Methods:

Final Exam.
Project 1 (Individual - Programming)
Project 2 (Individual - Programming)
Project 3 (Group - Programming)

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Programming in Visual C#	Julia Case Bradley, Anita Millspaugh	McGraw-Hill	2010	978–0–39–017402–4

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Microsoft Visual C# 2017 : An Introduction to Object-oriented Programming	Joyce Farrell	Course Technology	2017	978-1337102100
Beginning Visual C#	Karli Watson, Christian Nagel, Jacob Hammer Pedersen, Jon D. Reid, Morgan Skinner	Wiley Publishing, Inc.	2010	978-0-470-50226-6
Practical Database Programming With Visual C#.NET	Ying Bai	Pearson Education	2011	978-0-470-46727-5