

Introduction to Programming (2667A)

Course Description:

Elements of this syllabus are subject to change. This three day, instructor-led course introduces students to computer programming. Students will learn the fundamental concepts and terminology of software application development and develop skills in designing and writing simple computer programs. The course assumes no programming background and provides an overview of the software development process in addition to introducing important programming constructs and methodologies. The course covers such topics as programming language characteristics, integrated development environments, flowcharts, algorithms and pseudocode, variables, operators, conditional statements, looping statements, procedures, error-handling and debugging, object-oriented programming techniques, user interface design, software modeling, and Extensible Markup Language (XML) Web services.

Audience Profile

This course is intended for students who wish to:

- Learn what software development is and what software developers do.
- Learn programming concepts and terminology to facilitate communication with software developers.
- Learn to read, trace, and understand simple code.
- Learn to write, test, and debug code to solve a simple problem.
- Evaluate their personal aptitude for career as a programmer or software developer.

This course is appropriate for:

- Individuals who are contemplating a career in software development and who wish to understand the fundamentals of computer programming.
- Professionals, such as managers and technical salespeople, who must understand programming concepts and be able to communicate with software developers.
- End-users of productivity applications, such as Microsoft Word, Microsoft Excel, Microsoft PowerPoint, and Microsoft Access, who want to add advanced functionality to documents and databases.
- Web designers who want to understand how programs and scripts can make Web sites more dynamic.

At Course Completion

After completing this course, students will be able to:

- Describe a typical computer system and its critical components.
- Describe the software development process, its purpose, critical steps, and where programming fits in that process.
- Describe the purposes of programming and software development.
- Describe the evolution of common characteristics of, and differences among, modern programming languages.
- Define an integrated development environment.
- Describe the architectural aspects of a software application.
- Identify a problem that requires a programmed solution.
- Use common abstract methods to describe the solution concept.
- Implement variables.
- List and describe common operators.
- Implement conditional statements.
- Implement looping constructs.
- Implement procedures.
- Handle errors.
- Implement object-oriented programming techniques.
- Model an object-oriented program.
- Build a Windows-based application.
- Build a Web application.
- Describe XML Web services.

Training Cost:

The total cost for the training is **198 Euros**.