



Diploma in Software & App Development

#### Overview

All of today's software applications, from games played on mobile devices to online banking web pages, were created by application developers. The need for mobile application developers is at an all-time high and will continue to grow as technologies advance

## Courses

- 1. Introduction to C# and ASP.NET Programming
- 2. Programming Logic and Design
- 3. C# Development
- 4. Java Programming
- 5. Javascript
- 6. Python Development
- 7. SQL Programming
- 8. Android Tablet Development
- 9. Developing Mobile Apps Using Windows 10

#### **Detail Curriculum**

# 1. Introduction to C# and ASP.NET Programming

This course provides thorough coverage of object-oriented programming fundamentals in general, and C# programming fundamentals in particular. Students will examine such topics as multi-threading, XAML, the Windows Presentation Foundation, and dynamic data structures. Moreover, the programming principles learned in C# can be applied to other languages.



# 2. Programming Logic and Design

Provide beginning programmers with a guide to developing object-oriented program logic with this course. This course takes a unique, language-independent approach to ensure students develop a strong foundation in traditional programming principles and object-oriented concepts before learning the details of a specific programming language. The course covers object-oriented programming terminology without highly technical language, making the course ideal for students with no previous programming experience. Common business examples clearly illustrate key points. The course begins with a strong object-oriented focus that make even the most challenging programming concepts accessible. A wealth of updated programming exercises provide diverse practice opportunities.

#### 3. C# Development

This course teaches students the programming skills that are required for developers to create Windows applications using the C# language. Students review the basics of C# program structure, language syntax, and implementation details, and then consolidate their knowledge throughout as they build an application that incorporates several features of the .NET Framework. Students will also learn how to design and develop services that access local and remote data from various data sources.

## 4. Java Programming

This course gives an overview of the basics of JAVA and quickly gets into object oriented programming with Java topics also covered include, GUI Applets, GUI components, Strings, data structures, Multithreading, Networking, database driven web applications and Java Web Services.



# 5. Javascript

JavaScript enables Web publishers to add interactivity and intelligence to their HTML documents, increasing the usefulness of the things they publish on the Internet. Javascript is not nearly as complex as Java or ActiveX, and anyone willing to work through some exercises will be able to create useful programs in just a few days. This course assumes only a limited knowledge of HTML page creation. It takes the student from the most elementary aspects of JavaScript programming-embedding scripts in HTML documents, using comments, creating variables, using loops, using logic statements and creating functions-and helps them progress all the way through mastery of JavaScript's powerful event handlers.

## 6. Python Development

This course discusses control structures, functions, arrays, and pointers before objects and classes. This course also covers Internet programming: Access client-side network protocols and email tools, use CGI scripts, and learn website implementation techniques using Python.

# 7. SQL Programming

In this course, students will learn about the theory behind relational databases, relational database nomenclature, and relational algebra. Areas covered include the Structured Query Language (SQL) and optimizing databases through normalization. Students will apply their knowledge with hands-on exercises designed to teach the intricacies of database design methodology.



#### 8. Android Tablet Development

This course introduces the C++ standard library from the outset, drawing on its common functions and facilities to help the student write useful programs without first having to master every language detail. Also in this course students will learn how to build Native Android 8 applications using the Android NDK. This course provides hands-on exercises for creating apps that can adapt to different screen sizes—including desktop, laptop computers, tablets, and slates.

## 9. Developing Mobile Apps Using Windows 10

In this course students will learn essential programming skills and techniques that are required to develop Universal Windows apps. This includes a combination of both design and development skills, as well as ensuring that students are comfortable using and making the most of Visual Studio and Expression Blend tools.



