



Advanced Diploma in Programming

The Advanced Diploma in Programming enhances programming skills acquired in the Diploma level.

Why does the course exist – Programming is one of the most complicated courses. To be competitive, candidates need to be skilled and knowledgeable. By undertaking the Advanced level, candidates can produce highly marketable programs.

How it fits into the larger programme – C, C++, VB .Net and Java programming are the core programming languages required in the industry. Advanced skills are essential to candidates.

For whom it was designed – Candidates who complete the Diploma in Programming.

How it will benefit candidates – Candidates will be efficient in most sought out programming languages.

Subjects:

- Advanced Operating System Principles
- Advanced C Programming
- Advanced VB .Net Programming
- Advanced C++ Programming
- Advanced Java Programming

Advanced Operating System Principles - programming languages are controlled by operating systems. Knowledge of the behind the scenes of an operating system and how it controls the programming being written is equally as important programming itself.

Advanced C Programming - This course broadens the skills of a C language programmer by introducing sophisticated problem solving techniques including the advanced use of pointers, abstract data types, data structures, portability, and optimization techniques. Skills are reinforced by hands-on laboratory exercises.

Advanced VB .NET Programming - This course covers Microsoft .Net architecture, concentrating on more advanced features provided by the Visual Basic.NET programming environment. It addresses ways to use Visual Basic.NET features and the .NET framework to build real world distributed applications, demonstrating techniques and implementation steps to build each tier of a modern multi-tier application. Concepts covered include the Microsoft .NET architecture; object-oriented features of Visual Basic.NET; distributed application architecture; database connectivity features of .NET; implementing Windows based forms and web-based graphical user interfaces; web services; and performance and scalability issues.

Advanced C++ Programming - Expanding on several topics in C++, this course includes object-oriented analysis, design, and programming. Advanced memory management, stream and file I/O,

persistence, multiple inheritance, advanced polymorphic programming, templates, STL libraries, C++ style, and efficiency are also discussed.

Advanced Java Programming – This course introduces learners to advanced features of the Java programming language. Students will learn how to use inheritance, interfaces, exception handling, file input and output, and generic types, and how to incorporate graphical user interfaces (GUIs) into their programming applications. Students will also learn how to apply object-oriented design and programming principles to their programs. Typical assignments and projects include using built-in and programmer-defined classes to develop full-featured, easy-to-use programs.