Smart Choice!

BLACKHAWK TECHNICAL COLLEGE

IT- VISUAL BASIC .NET (VB .NET) DEVELOPER

(12 Credits) Certificate 99-9126

This certificate is designed to prepare information technology professionals through credit-based lifelong learning and continuing education. Students completing the series of courses offered in this certificate will learn skills related to Visual Basic .NET programming, including server-side (utilizing ASP .Net) and client-side applications. Anyone whithout a background in object-oriented analysis and design and/or databases is encouraged to take the listed optional courses.

The current demand for IT professionals with Visual Basic .NET experience is growing. Typical occupational placement is likely to include positions related to software development and Web-based development. Current programmers who want to increase their skills will benefit. Database managers, Web, Internet and Extranet support positions will benefit from compentencies presented in this certificate. This certificate will also help prepare the attendee for Microsoft's Visual Basic .Net Certification.

Prior knowledge of programming logic, Web development, database concepts, and programming are recommended. Recommended pre-admission skills/requirements include an Associate's Degree in Information Technology or a minimum of three years related work experience. Learners in this certificate will be expected to have experience with relational database design, at least one procedural programming language and a Visual programming language.

Course	Course Name	Credits	Lec-Lab
152-142	Introduction to Visual Basic .NET	3	2 - 2
152-144	Intermediate VB .NET Programming[1]	3	3 - 0
152-161	Web Application Development[1]	3	3 - 0
152-148	Relational Database Coding	3	2 - 2

Optional Courses:

Course	Course Name	Credits	Lec-Lab
152-147	Relational Database Development	3	2 - 2
152-163	Relational Database Design[1]	3	3 - 0
152-160	Object Oriented Design w/UML	3	3 - 0
152-162	Object Oriented Systems Analysis[1]	3	3 - 0

Course Descriptions

152-142 Introduction to Visual Basic .NET Programming 3 Credits
This lecture/lab course uses the Visual Basic .NET (VB .NET) programming language to teach problem-solving principles and demonstrates how to apply said principles in the development of algorithms designed to solve typical business problems. Structured programming (sequence, selection, and iteration) utilizing pseudocode is covered in detail. Introductions to database concepts and object-oriented programming (OOP) are also given.

152-144 Intermediate Visual Basic .NET Programming 3 Credits
This course provides students with a comprehensive understanding of object-oriented system development. It examines and uses the prewritten .NET Framework classes and utilizes the MSDN help facility. Topics include: collections, exception handling and advanced development techniques such as ASP .NET and database programming using ADO .NET ***Prerequisite: 152-142 Introduction to Visual Basic .NET Programming***

152-161 Web Application Development Using ASP .NET 3 Credits
Students learn to develop Microsoft ASP .NET applications that deliver dynamic content to the Web. An emphasis is placed on server-side programming and the role ASP .NET plays. As part of the class, students create Web forms with server controls, display dynamic data from a database using Microsoft ADO .NET, read XML configuration files and learn to debug ASP .NET web pages. ***Prerequisite: 152-144 Advanced Visual Basic .NET Programming***

152-148 Relational Database Coding 3 Credits
This is class includes hands-on training utilizing a relational database management system (e.g., MySQL) in an advanced client/server software environment. Topics covered include: advanced structured query language (SQL) commands and concepts, and database programming utilizing the PHP programming language. ***Prerequisite: 152-147 Relational Database Development***

152-147 Relational Database Development 3 Credits
Relational Database Development provides a general overview of database theory, including relational database management systems (RDBMSs) and normalization. The fundamentals of the structured query language (SQL), data definition language (DDL), and data manipulation language (DML) commands, utilizing client/server based database software, (e.g., MySQL) are also covered.

152-163 Relational Database Design 3 Credits
Relational database design is an advanced course in database concepts and design. Students will design, normalize, and develop a database and program the associated interface in a realistic environment. ***Prerequisite: 152-148 Relational Database Coding***

152-160 Object-Oriented Design with UML 3 Credits
This course is designed to be a practical, introductory-level systems analysis course utilizing Unified Modeling Language (UML) concepts. Emphasis is on the physical system elements: data design, object-oriented design, user interface design (screen and report) and system interface design. The use of CASE tools (e.g. Visio) is integrated throughout the course to enhance the design experience.

152-162 Object-Oriented Systems Analysis 3 Credits
Object-Oriented Systems Analysis is an intermediate course in systems analysis from an object-oriented (OO) point-of-view. The course will emphasize the analysis and documentation of systems, physical OO modeling, and OO design. Students will demonstrate knowledge of OO concepts/terminology, and the role UML plays in the systems analysis and design process. ***Prerequisite: 152-160 Object-Oriented Design with UML***