

IT APPLICATION DEVELOPMENT&WEB (152)

152-119 Introduction to Programming with JavaScript Credits: 3

Teaches the basic concepts of programming using the JavaScript language. Topics include: embedding JavaScript in HTML, event-driven programming techniques, program control logic, pseudocode, and an introduction to object-oriented programming.

Aid Code: 10 - Associate Degree.

Pre-requisites: (631-111)

Complete Course Listing

152-133 Advanced Systems Documentation Credits: 2

This lecture/lab course will focus on technical writing and documentation skills. Hands-on work will include writing and editing business letters and memos, persuasive documents, technical reports and html documentation. The course will culminate in a short research paper and oral presentation.

Aid Code: 10 - Associate Degree.

Pre-requisites: (150-120) and (801-195 or 801-136 or Test Waived-College Degree)

Complete Course Listing

152-139 Current Issues and Trends in Information Technology Credits: 3

Current Issues & Trends is a course designed to cover a "hot" computer area. Possible topics include: advanced applications; object orientated programming; computer security, computer ethics; and Internet programming.

Aid Code: 10 - Associate Degree.

Complete Course Listing

152-142 Introduction to .NET Programming Credits: 3

This lecture/lab course uses the Visual Basic .NET (VB.NET) and/or C# 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, database design, and object-oriented programming (OOP) are also given. 152-119 Learning to Program with Java Script is a recommended pre requisite.

Aid Code: 10 - Associate Degree.

Pre-requisites: (152-119) and (152-157) and (152-163)

Complete Course Listing

152-143 Introduction to Java Programming Credits: 3

Introduction to Java Programming introduces programming and object-oriented design concepts using the Java programming language. Students examine Java programming basics and use a text editor in a development environment. Design concepts and programming tools will be integrated with an emphasis on practical business solutions.

Aid Code: 10 - Associate Degree.

Pre-requisites: 152-119

Complete Course Listing

152-145 Advanced Java Programming Credits: 3

This course is a continuation of Introduction to Java Programming. Students will further analyze inheritance, exception handling, files, database access, advanced GUI applications and array lists.

Aid Code: 10 - Associate Degree.

Pre-requisites: 152-143

Complete Course Listing

152-147 Relational Database Development Credits: 3

Relational Database Development is a lecture/lab class split into two parts: 1) A general overview of database theory, including: relational database management systems (RDBMSs) and normalization. 2) The fundamentals of the structured query language (SQL) data definition language (DDL) and data manipulation language (DML) commands, utilizing client/server based database software. For IT-Web Analyst/ Programmer students, 152-163 (Relational Database Design) is a recommended pre req for this course.

Aid Code: 10 - Associate Degree.

Pre-requisites: (152-163) and (804-133)

Complete Course Listing

152-148 Relational Database Coding Credits: 3

Students will engage in hands-on training, utilizing a relational database management system (e.g., MySQL) in a client/server web based environment which uses PHP on the server side. Students will analyze advanced structured query language (SQL) commands and concepts, and web site development utilizing the PHP programming language.

Aid Code: 10 - Associate Degree.

Pre-requisites: (152-157) and (152-182)

Complete Course Listing

152-149 Secure Coding Credits: 3

Secure coding involves concepts such as: 1) The validation of computer program input. 2) The heeding of computer compiler warnings. 3) The internal and external sanitization of any and all computer program data. 4) The adherence to the principle of least privilege. 5) The adoption of a secure coding standard. The Secure Coding course will teach students how to adhere to practices such as these and others to build secure code from the onset of an information technology project.

Aid Code: 10 - Associate Degree.

Pre-requisites: (152-148) and (152-158) and (152-161)

Complete Course Listing

152-150 Systems Analysis and Design

Credits: 3

Systems Analysis & Design is a lecture/lab course for second year students, intended to introduce the concepts involved in a small-to-medium sized information systems project from inception to implementation. Traditional analysis and design methodologies as well as object-oriented methodologies will be covered. Throughout the life cycle of the analysis and design process, Microsoft Project will be used. Students will use Microsoft Visio as a tool to diagram various components of the system during the analysis phase. Additional concepts covered will be verbal and written communication with users and team members, professional behavior, professional attire, problem identification, and problem solving. Systems Analysis and Design will draw on knowledge obtained from previous classes, and require the student to synthesize and apply that knowledge.

Aid Code: 10 - Associate Degree.

Pre-requisites: (150-127)

Complete Course Listing

152-153 Mobile Web App Development - iPhone

Credits: 3

Students in this course will analyze the basics of creating Mobile Web applications for an iPad/iPhone. The basics of the Objective-C language are presented, and students will engage in building an actual working iPhone/iPad application.

Aid Code: 10 - Associate Degree.

Pre-requisites: (152-148) and (152-158) and (152-161) and (152-145)

Complete Course Listing

152-156 Mobile Web App Development - Android

Credits: 3

This course examines the basics of creating Mobile Web applications for an Android phone. The associated android basic programming constructs defined, using the Java programming language. Students will build an actual working Android application.

Aid Code: 10 - Associate Degree.

Pre-requisites: (152-148) and (152-158) and (152-145)

Complete Course Listing

152-157 Website Development-XHTML/CSS

Credits: 3

Website Development - XHTML/CSS is a beginning class in client-side Web development. Topics covered include: The fundamentals of the Hypertext Markup Language (HTML) and XHTML, Cascading Style Sheets (CSS), an introduction to JavaScript.

Aid Code: 10 - Associate Degree.

Pre-requisites: (631-111)

Complete Course Listing

152-158 Advanced Website Development

Credits: 3

In this course, students will engage in the development of client-side web sites using frameworks such as Bootstrap to simplify development, allow development of responsive web sites, and greatly increase the appeal and functionality of the site. Students will analyze other concepts which include Content Management systems, such as Git and Github.

Aid Code: 10 - Associate Degree.

Pre-requisites: (152-182)

Complete Course Listing

152-161 Web Application Development Using ASP.NET

Credits: 3

Students 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 this course, 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.

Aid Code: 10 - Associate Degree.

Pre-requisites: (152-147) and (152-167)

Complete Course Listing

152-163 Relational Database Design

Credits: 3

Relational database design is a beginning course in database concepts and design, utilizing Microsoft Access. Students will design, normalize and develop a database and program the associated interface in a realistic environment.

Aid Code: 10 - Associate Degree.

Pre-requisites: (631-111)

Complete Course Listing

152-164 Design and Implementation Projects

Credits: 3

This capstone course is designed to have the student utilize all concepts learned in this program in a real world application setting. Students work with a team to develop an integrated Information Solution for a large scale project. Students will be involved in defining their own skills in both technical and cooperative team interaction areas.

Aid Code: 10 - Associate Degree.

Pre-requisites: (152-161) and (152-148) and (152-145)

Complete Course Listing

152-167 AJAX and JavaScript Website Development

Credits: 3

Students in this course are introduced to the basics of DHTML, JavaScript, and the XMLHttpRequest call. Students create web sites using JavaScript and AJAX to enable them to be responsive and feature-rich.

Aid Code: 10 - Associate Degree.

Pre-requisites: (152-157) and (152-163)

Complete Course Listing

152-181 Supervisory Occupational Experience-Web Analyst**Credits:** 2

Micro Programmer Internship prepares student for the transition from the classroom to the work place. Students will be employed in actual jobs in their field. They will use this opportunity to apply learned concepts and skills in practical situations and acquire the knowledge and experience of current techniques, methods, and theories in a data processing environment. The intern's progress will be monitored and evaluated by the sponsoring employer and a BTC Internship Advisor. The desired outcome of the course is to qualify the student for eventual employment in an entry-level IT position.

Aid Code: 10 - Associate Degree.**Pre-requisites:** 152-150
Complete Course Listing**152-182 Web Analyst Field Study****Credits:** 1

The Web Analyst Field Study is a course designed to equip the student with the skills necessary to plan and execute an active job search. Topics covered include: resumes; personal data files; letters of application; and interviewing techniques. Students will prepare a strategy for finding and obtaining a position that best fits their goals and interests. Students will also cover the organization of a typical data processing department.

Aid Code: 10 - Associate Degree.**Co-requisites:** (152-147) and (152-142) and (152-137)
Complete Course Listing**152-191 Secure e-Commerce Concepts****Credits:** 3

This course is a review of Internet/Worldwide Web/e-Commerce concepts, including Internet development, internetworking principles, Internet services, Web programming, site administration, and business and security concepts, including both human and technological factors.

Aid Code: 10 - Associate Degree.
Complete Course Listing**152-192 Designing Secure Websites****Credits:** 3

This course is designed to educate students about the security issues of the Worldwide Web, Web servers and Web applications. The learner will be introduced to client and server-side security principles and programming. At course completion, the student will be able to define, design and implement a secure Web site. Successful completion of 152-191 "Secure e-Commerce Concepts" is highly recommended prior to this course.

Aid Code: 10 - Associate Degree.
Complete Course Listing**152-193 Client/Server Systems Security****Credits:** 3

This course provides an overview of the most critical topic in the Information Assurance arena: secure data exchange between internetworked systems. Topics include client/server security system design concepts; developing a database security and audit plan; system design and development; user-, group-, and application-level permissions; data integrity enhancement and maintenance; and the role of the database administrator. A methodology for anticipating, detecting, reacting to, and response to network attacks will be a significant part of the course material.

Aid Code: 10 - Associate Degree.**Pre-requisites:** (150-151 and (152-143
Co-requisites: 150-151) or 152-143)
Complete Course Listing