INTERNET/INTRANET (WEB) (152)

152-101. Python Programming. (1 Credit)
This course introduces the Python Programming Language. Upon completion of this course, students will be able to write Python scripts that process input and output files, manipulate strings, parse text, perform calculations and write Regular Expressions. The course will include interactive lectures and outside course work.
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=101)

152-102. Mobile App Dev. (1 Credit)
In this hands-on course, discover how to build and deploy Android and iOS (iPhone) apps by applying your existing HTML and CSS skills using the PhoneGap Build service, an open-source development framework that is part of the Adobe Creative Cloud and Cordova.
Prerequisites: (152-169 with a minimum grade of C or 152-168 with a minimum grade of C or 152-105 with a minimum grade of C or 152-107 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=102)

152-103. Mobile Application Development. (2 Credits)
Explore the entire life cycle of creating and distributing a mobile app, from UI design to app creation to distribution. Learn iPhone and Android user interface design guidelines and create apps with your existing technical skills using cross-platform frameworks and tools.
Prerequisites: 152-109 (may be taken concurrently) with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=103)

152-104. Advanced Python Programming. (1 Credit)
Expand upon the skills you learned in Python Programming by exploring advanced data types, best practices and object-oriented coding within the context of design patterns.
Prerequisites: 152-101 (may be taken concurrently) with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=104)

152-105. Intro to Web Development. (2 Credits)
Learn to create websites with HTML 5, CSS 3 and Dreamweaver with an understanding of various design concepts including usability, web style and Search Engine Optimization (SEO). Prepare to manage a website with common site management tools on a Windows and Linux server. Collect and present website analytics and usage reports. Articulate the role that content management systems play in the market and create a site in WordPress that implements all the tools and techniques taught in the course.
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=105)

152-107. Introduction to Programming. (2 Credits)
Learn C# using Visual Studio. Create console applications to accept input and create output to the screen and file system. Implement conditionals, loops and variables to meet the requirements of each project and assignment. Break each project and assignment down into individual tasks and processes. Ensure the correct program flow and document tasks, decisions and loops using flow charts and pseudocode. Use collections with system data types and explore object-oriented programming considerations and techniques. The class will focus on foundational programming and logic skills to prepare you for a career in information technology.
Prerequisites: Computer Skills Assessment70 or College Profi - Comp Skills or Work Experience - Comp Skills or 860-702 with a minimum grade of S
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=107)

152-108. Web Server Administration. (2 Credits)
Obtain technical skills useful for web developers and an overview of networking, including the OSI Model, TCP/IP protocol suite, DNS, NAT and DHCP. Explore a variety of security principles such as least privilege, firewall configuration, permissions and port security. Gain an introduction to Windows and Linux server administration, and learn how to install and configure both Microsoft IIS and Linux Apache web servers. Plus, develop strategies for deploying web applications.
Prerequisites: 152-105 (may be taken concurrently) with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=108)

152-109. .Net Web Development. (4 Credits)
Explore server-side web development with ASP.NET MVC using C# and Razor to build dynamic, database-driven applications. Design and deploy a major project on your own domain and hosting account. Learn to manage hosting, publish apps, and create views, controllers, models and layouts. Use Bootstrap for responsiveness and enhance UX with jQuery, CSS animations and Modernizr. Gain experience with routing, LINQ, Entity Framework, AJAX, and CRUD operations. Secure your apps with ASP.NET Identity and user/role-based authentication.
Prerequisites: (152-168 with a minimum grade of C or 152-169 with a minimum grade of C) and (156-101 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=109)

152-111. Python - Game Development. (1 Credit)
Learn the techniques of game design by coding popular games such as Pong, tower defense and a simple platformer using the Python programming language. Learn how to handle input from a keyboard and mouse, use GUI libraries such as Pygame to render graphics, and program basic artificial intelligence algorithms. Use object-oriented principles to create modular, well-designed games.
Prerequisites: 152-101 (may be taken concurrently) with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=111)

152-112. Intro to Programming with C#. (3 Credits)
Learn to program using the C# programming language, and get an introduction to programming logic, including sequential commands, decisions, loops and arrays. Study object-oriented programming (OOP) concepts such as class design and instantiation, variable scope, inheritance, interfaces, enums, encapsulation and polymorphism.
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=112)

152-113. Python - IOT Development. (1 Credit)
Today, nearly anything can be connected to the internet, including televisions, thermostats, garage doors and more. Explore the basics of electricity and harness it to create DC circuits that utilize buttons, diodes, LEDs, resisters, jumpers, sensors and more. Ultimately, create a system that can communicate with your DC circuit using a microcontroller and Python.
Prerequisites: 152-101 (may be taken concurrently) with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=113)

152-115. Database Concepts and SQL. (3 Credits)
This course will lay the groundwork for successful creation and use of databases and focus on real-world scenarios. Students will learn SQL, including joins, aggregate functions, subqueries, and the basics of security and permissions. Students will learn to analyze report requests and create basic reports. Normalization and database design will be introduced.
Prerequisites: (152-107 with a minimum grade of C or 150-154 with a minimum grade of C or 152-138 with a minimum grade of C or 152-134 with a minimum grade of C) and (804-133 (may be taken concurrently) with a minimum grade of C or 804-123 (may be taken concurrently) with a minimum grade of C or 804-118 (may be taken concurrently) with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=115)

152-129. PHP Web Development. (3 Credits)
This PHP programming course provides the knowledge necessary to design and develop dynamic, database-driven web pages using PHP. PHP is a language written for the web, quick to learn, easy to deploy and provides substantial functionality required for e-commerce. This course introduces the PHP framework and syntax, and it covers in depth the most important techniques used to build dynamic web sites. Perform hands-on practice with a MySQL database to create database-driven HTML forms and reports.
Prerequisites: (152-169 with a minimum grade of C or 152-168 (may be taken concurrently) with a minimum grade of C) and 804-133 with a minimum grade of C and (201-110 with a minimum grade of C or 152-105 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=129)

152-130. Introduction to Java. (2 Credits)
This course is for students who have successfully completed an introduction to programming course with object-oriented programming (OOP). Explore the syntax and nuances specific to Java concerning data types, conditional and loop structures, method calls, static variables, functions and arrays. Explore advanced Java topics, including Enums, I-O, collections and multi-threading.
Prerequisites: (804-133 (may be taken concurrently) with a minimum grade of C or 804-116 (may be taken concurrently) with a minimum grade of C or 804-118 (may be taken concurrently) with a minimum grade of C or 804-195 (may be taken concurrently) with a minimum grade of C or 804-198 (may be taken concurrently) with a minimum grade of C) and 152-112 with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=130)

152-131. Software Architecture. (2 Credits)
Learn how to design and build software systems that are scalable, robust and adherent to industry best practices. Explore the three essential principles of object-oriented software engineering: GRASP, SOLID and the Gang of Four (GoF) design patterns. Demonstrate your understanding of these principles through coding projects in the object-oriented language of your choosing.
Prerequisites: (152-130 (may be taken concurrently) with a minimum grade of C or 152-138 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=131)

152-135. Advanced Java Programming. (4 Credits)
Expand your Java programming skills by practicing object-oriented analysis and design. Explore industry standard design patterns (GRASP and GoF) and architectural best practices (programming to interfaces and using composition, e.g.) that lead to improved software quality, flexibility and maintainability. Additionally, discover algorithms, file I/O and collections.
Prerequisites: (152-134 with a minimum grade of C or 152-138 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=135)

152-138. Java Programming. (3 Credits)
Learn to program using the Java programming language, and get an introduction to programming logic, including sequential commands, decisions, loops and arrays. Study object-oriented programming (OOP) concepts such as class responsibilities, composition, inheritance, interfaces, encapsulation and polymorphism.
Prerequisites: (Computer Skills Assessment70 or College Profi - Comp Skills or Work Experience - Comp Skills or 860-702 with a minimum grade of S) and (804-133 (may be taken concurrently) with a minimum grade of C or 804-118 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=138)

152-139. Web Development/PHP2. (3 Credits)
This PHP course is a continuation of the first that places emphasis on e-commerce skills including user authentication, data validation, dynamic data updates and shopping cart implementation. Also learn how to configure PHP on the Apache Web Server. Comprehensive lab exercises provide facilitated hands-on practice crucial to developing competence and confidence with the new skills being learned.
Prerequisites: 152-129 with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=139)

152-142. Mobile Application Development. (3 Credits)
Explore the entire life cycle of creating and distributing a mobile app, from UI design to app creation to distribution. Learn iPhone and Android user interface design guidelines and create apps with your existing technical skills using cross-platform frameworks and tools.
Prerequisites: 152-109 with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=142)

152-143. WordPress Development. (3 Credits)
Learn object-oriented PHP techniques to customize WordPress and develop custom plugins.
Prerequisites: 152-129 with a minimum grade of C and 201-125 with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=143)

152-144. Integrated Web Development. (3 Credits)
This course will focus on utilizing a strategic web development workflow. Topics include setting up a local development environment, package managers, version control, automation, and deployment.
Prerequisites: 152-179 with a minimum grade of C and (152-143 with a minimum grade of C or 152-139 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=144)

152-145. Advanced Web Services Developm. (2 Credits)
Today virtually anything can be connected to the internet – televisions, thermostats, doorbells, garage doors, refrigerators, etc. To do this, you will create RESTful web services using .NET Core and MS SQL Server. Learn the basics of electricity, including voltage, current and resistance and how they are related using Ohm's Law. Harness electricity to create DC circuits that use buttons, diodes, LEDS, resistors, jumpers, sensors and more. The ultimate goal is to create a system that can communicate with your DC circuit using a microcontroller such as a Raspberry Pi or Arduino. That system will connect to the Internet of Things using your .NET Core Web API.
Prerequisites: 152-109 with a minimum grade of C and 152-179 with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=145)

152-149. Content Management Systems. (3 Credits)
Content management systems support the process of collecting and publishing content on the Web. Content management systems also provide a platform for many "community" features such as comments, discussion and chat. Learn a process for identifying content types and establishing a workflow for editing and approving content, then configure a content management system to meet the needs of an outside client.
Prerequisites: (152-143 with a minimum grade of C or 152-139 with a minimum grade of C) and 201-130 with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=149)

152-168. JavaScript. (3 Credits)
This course is an introduction to programming fundamentals using JavaScript. JavaScript is a client-side scripting language used for creating dynamic web applications. Fundamentals covered include variables, decisions, functions, events, loops and arrays. Use these fundamentals by applying them to a range of programs that solve personal and business problems with hands-on exercises. Cascading style sheets (CSS), hypertext markup language (HTML) and the document object model (DOM) will also be discussed.
Prerequisites: 152-105 (may be taken concurrently) with a minimum grade of C or 201-110 (may be taken concurrently) with a minimum grade of C
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=168)

152-169. JavaScript. (4 Credits)
This course is an introduction to programming fundamentals using JavaScript. JavaScript is a client-side scripting language used for creating dynamic web applications. Fundamentals covered include variables, decisions, functions, events, loops and arrays. Use these fundamentals by applying them to a range of programs that solve personal and business problems with hands-on exercises. Cascading style sheets (CSS), hypertext markup language (HTML) and the document object model (DOM) will also be discussed. (If you have never programmed before, please take 152-107 first.)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=169)

152-170. IS Project. (4 Credits)
Work with a team to perform service learning and develop a software system using scrum. Learn to complete a project as a virtual team using industry-standard tools. Demonstrate mastery of program outcomes by participating in an integrated software project.
Prerequisites: 107-119 with a minimum grade of C and (152-109 with a minimum grade of C or 156-110 with a minimum grade of C) and (152-179 with a minimum grade of C or 156-102 with a minimum grade of C) and (152-131 with a minimum grade of C or 152-135 with a minimum grade of C or 156-111 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=170)

152-171. Advanced Web Services Develop. (3 Credits)
Today, nearly anything can be connected to the internet, including televisions, thermostats, garage doors and more. Learn to create RESTful web services using .NET core and MS SQL Server. Explore the basics of electricity and harness it to create DC circuits that utilize buttons, diodes, LEDs, resisters, jumpers, sensors and more. Ultimately, create a system that can communicate with your DC circuit using a microcontroller such as Raspberry Pi or Arduino. Then, connect this system to the Internet of Things using your .NET Core Web API.
Prerequisites: 152-179 with a minimum grade of C and (152-109 with a minimum grade of C or 152-197 with a minimum grade of C or 152-198 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=171)

152-179. JavaScript 2. (4 Credits)
Learn to create interactive front-end web applications. Use modern JavaScript and front-end frameworks to create interface interactions, animations, controls and components for JavaScript applications. Use APIs to create data-driven content using Ajax and WebSockets.
Prerequisites: (152-168 with a minimum grade of C or 152-169 with a minimum grade of C) and (152-109 (may be taken concurrently) with a minimum grade of C or 152-129 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=179)

152-197. Distributed Java. (3 Credits)
Learn to create RESTful Web Services and Micro Services using Java's Enterprise Edition. Create services using Spring 4.0, and get an introduction to JDBC, DAO and the legacy technologies: JSP and Servlets.
Prerequisites: (152-135 with a minimum grade of C or 152-131 with a minimum grade of C) and (152-115 with a minimum grade of C or 156-109 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=152&num=197)