

# IT APPLICATION DEVELOPMENT&WEB (152)

Information provided includes course descriptions by subject only. For complete 2024-2025 programs/academic plans, please refer to Academic Programs (<http://catalog.blackhawk.edu/academics/>).

## 152-001 Artificial Intelligence (AI) for Web Developers

**Credits:** 2

This course introduces web developers to the rapidly evolving field of artificial intelligence (AI) and its applications in web development. Students will learn how to integrate AI-powered tools and techniques into modern web applications to create smarter, more responsive, and personalized user experiences. The course covers key AI concepts including machine learning, natural language processing, and computer vision, and how they can be applied to front-end and back-end development. Through hands-on projects, students will gain practical experience using AI APIs, frameworks, and libraries to enhance web functionality, automate tasks, and optimize performance.

**Aid Code:** 10 - undefined.

**Co-requisites:** 152-119 and 152-125 and 152-127 and 152-128

Complete Course Listing

## 152-119 High Level Scripting

**Credits:** 1-3

Students apply the skills of high-level scripting in this course that covers syntax, variables, conditionals and functions, along with a focus on scripting for the web with Javascript.

**Aid Code:** 10 - undefined.

**Pre-requisites:** 152-195

Complete Course Listing

## 152-125 Design Basics for Front-end Development 2

**Credits:** 1-2

This course will further analyze design elements of web pages and evaluate more advanced level layout creation and customization with scripting.

**Aid Code:** 10 - undefined.

Complete Course Listing

## 152-126 Introduction to Programming

**Credits:** 1-2

Designed for students with little or no prior programming experience, this course introduces the fundamental concepts of object oriented programming. Students engage in topics which include integers, strings, and variables, and objects. Students will analyze the core elements of programs, run them at the command line, spend some time debugging, and create a simple program of their own. Students will examine the history of programming languages. They will analyze the standards of basic programming language and learn the standards for a simple programming language.

**Aid Code:** 10 - undefined.

Complete Course Listing

## 152-127 Web Servers and Web Server Administration

**Credits:** 1-2

In this course, students will prepare an environment for, and then install and configure, an open source web server. They will configure their server and install services to use for projects during the remainder of the semester. Students will also use DNS to connect a URL to the virtual server space they've created.

**Aid Code:** 10 - undefined.

Complete Course Listing

## 152-128 Markup Basics 2

**Credits:** 1-2

This course is a continuation of markup basics and will focus on how to create interactive web pages, showcase tabular data effectively, and use markup code to make content more accessible.

**Aid Code:** 10 - undefined.

Complete Course Listing

## 152-130 Project & Framework Management

**Credits:** 1-2

In this course, students will evaluate various tools used in web development to plan, organize, and execute digital projects. Storyboarding, wireframes, and usability testing will be demonstrated. Students will explore the use of various project management tools.

**Aid Code:** 10 - undefined.

Complete Course Listing

## 152-131 Version Control

**Credits:** 1-2

This course has the students explore the basics of software version control (SVC), including process management. Students will evaluate a brief history of SVC and analyze the fundamental concepts of check-in/checkout, forking, merging, commits, and distribution. Students will create a repository and manage files within it.

**Aid Code:** 10 - undefined.

Complete Course Listing

## 152-132 Cybersecurity

**Credits:** 1

Provides an overview of the importance of web site and server security awareness and data confidentiality through basic aspects of information security. This course introduces students to common methods of securing data. Presents best practices in access control and password policies on the web.

**Aid Code:** 10 - undefined.

Complete Course Listing

### 152-134 Responsive Design

**Credits:** 1-2

Students analyze the mobile first responsive design method, outlining the basics of creating web sites that are functional cross platform and device. As they become comfortable with the methods used, students will learn to code for accessibility.

**Aid Code:** 10 - undefined.

Complete Course Listing

### 152-142 Programming

**Credits:** 1-3

Students in this course will identify and apply the foundations of programming on the LAMP stack (Linux, Apache, MySQL, and PHP), from a general overview of a server-side programming language. Students will learn to program with PHP and create functional web pages with server side scripting.

**Aid Code:** 10 - undefined.

**Pre-requisites:** (152-119)

Complete Course Listing

### 152-156 Social Media

**Credits:** 1-3

Students will explore the uses of social media and the tools that are available to manage it. They will then learn about the integration of social media with web sites and explore the options in social media for advertising, including creating ads and identifying audiences. Finally, students will explore open Application Programming Interfaces (APIs) within social media software and build a functioning program that connects to a social media platform.

**Aid Code:** 10 - undefined.

Complete Course Listing

### 152-163 Relational Database Design & Development

**Credits:** 1-3

This course gives students a knowledge base in database concepts for design and development. Students will design and then develop a database in a virtual environment, and write code to manipulate the data in the database created.

**Aid Code:** 10 - undefined.

Complete Course Listing

### 152-195 Markup Basics 1

**Credits:** 0.5-1

Students will analyze the foundation of web pages - markup languages. Students analyze the basics of how web browsers read markup language to display web pages. Students will organize text and add images or videos to create useful and engaging web pages.

**Aid Code:** 10 - undefined.

Complete Course Listing

### 152-197 Design Basics for Front-end Development 1

**Credits:** 0.5-1

This course will analyze the elements of good design while also learning the basics of design and style coding. Students will use scripting to add color and background images and stylize fonts.

**Aid Code:** 10 - undefined.

Complete Course Listing

### 152-199 Fundamentals of High-Level Scripting

**Credits:** 0.5-1

Student apply the basics of high-level scripting in this course that covers syntax, variables, conditionals and functions, along with a focus on scripting for the web with Javascript.

**Aid Code:** 10 - undefined.

Complete Course Listing

### 152-202 Intermediate High-Level Scripting

**Credits:** 0.5-1

This course provides an overview and analysis of the JavaScript application architecture and student analyze solutions like jquery, Node, Javascript with HTML5, authentication, authorization, and modern JS Libraries.

**Aid Code:** 10 - undefined.

**Co-requisites:** 152-199

Complete Course Listing

### 152-205 Advanced High-Level Scripting

**Credits:** 0.5-1

This course provides students with an advanced understanding of the core mechanics of how JavaScript compiles, optimizes, and executes in the browser, enabling students to better analyze Javascript security concerns like XSS (cross site scripting) and CSRF (cross site request forgery).

**Aid Code:** 10 - undefined.

**Co-requisites:** 152-202

Complete Course Listing

### 152-208 Relational Database Coding

**Credits:** 0.5-1

In this continued exploration of server-side site development, the student will connect to a database on a virtual server and allow a client application to read, write and update the database. Students will also develop skills in analyzing and evaluating how web server cookies function.

**Aid Code:** 10 - undefined.

**Co-requisites:** 152 207

Complete Course Listing

**152-211 Project & Framework Management 1****Credits:** 0.5-1

In this course, students will evaluate various tools used in web development to plan, organize, and execute digital projects. Storyboarding, wireframes, and usability testing will be demonstrated.  
**Aid Code:** 10 - undefined.

Complete Course Listing

**152-212 Project & Framework Management 2****Credits:** 0.5-1

In this course, students will continue their knowledge and use of tools for managing and streamlining digital projects, analyzing which tools are best suited for various situations.  
**Aid Code:** 10 - undefined.  
**Co-requisites:** 152-211

Complete Course Listing

**152-213 Version Control 1****Credits:** 0.5-1

This course has the students explore the basics of software version control (SVC), including process management. Students will evaluate a brief history of SVC and analyze the fundamental concepts of check-in/checkout, forking, merging, commits, and distribution.  
**Aid Code:** 10 - undefined.  
**Co-requisites:** 152-212

Complete Course Listing

**152-215 Content Management Systems 1****Credits:** 0.5-1

This course will review the many available options for content management systems, both proprietary and open source. Students will evaluate the options for systems and identify the best solution for different scenarios.  
**Aid Code:** 10 - undefined.

Complete Course Listing

**152-216 Content Management Systems 2****Credits:** 0.5-1

In this course, students will install and configure an open source content management system, along with user training and roll out.  
**Aid Code:** 10 - undefined.  
**Co-requisites:** 152-215

Complete Course Listing

**152-218 Search Engine Optimization****Credits:** 0.5-1

In this course, students will identify what search engine optimization (SEO) is and why its an important skill for front end developers to possess. Students will analyze free and paid keyword search tools, identify keywords rank, and generate a keyword plan.  
**Aid Code:** 10 - undefined.

Complete Course Listing

**152-222 Front End Framework****Credits:** 0.5-1

Student will develop the skills and knowledge they need to code with front end framework.  
**Aid Code:** 10 - undefined.

Complete Course Listing

**152-223 Mobile Application Development****Credits:** 0.5-1

Students in this course identify and apply learning of how mobile technology works, including tools for development, specifications, and implementation.  
**Aid Code:** 10 - undefined.

Complete Course Listing

**152-224 Emerging Technologies Research****Credits:** 0.5-1

In this course, students will identify a problem that can be solved by technology and research the options for solving the problem using a specified programming language or web tool.  
**Aid Code:** 10 - undefined.

Complete Course Listing

**152-225 Programming 1****Credits:** 0.5-1

Students in this course identify and apply the foundations of programming on the LAMP stack (Linux, Apache, MySQL, and PHP), from a general overview of a server-side programming language..  
**Aid Code:** 10 - undefined.

Complete Course Listing

**152-232 Responsive Design 2****Credits:** 0.5-1

Students create responsive components within web pages including mobile web forms and breakpoints.  
**Aid Code:** 10 - undefined.  
**Co-requisites:** 152 231

Complete Course Listing

**152-234 Resume and Portfolio Development for Web Developers****Credits:** 0.5-1

Students review the body of work they've completed during their time in the program and use this review to develop a full portfolio website. From this website portfolio review, students will also engage in resume writing and employment readiness skills.  
**Aid Code:** 10 - undefined.

Complete Course Listing

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**152-235 Emerging Technologies Capstone**

**Credits:** 1-3

In this capstone course, students will use the skills learned in the program to identify a digital solution to a complex problem. They will then outline the problem, find a solution, present their findings for peer review and collaboration.

**Aid Code:** 10 - undefined.

**Co-requisites:** 152-224

[Complete Course Listing](#)

**152-402 Intro to Web Development for Entrepreneurs**

**Credits:** .1

This course teaches practical skills in web development with a focus on creating and managing websites for business needs.

**Aid Code:** 47 - undefined.

[Complete Course Listing](#)