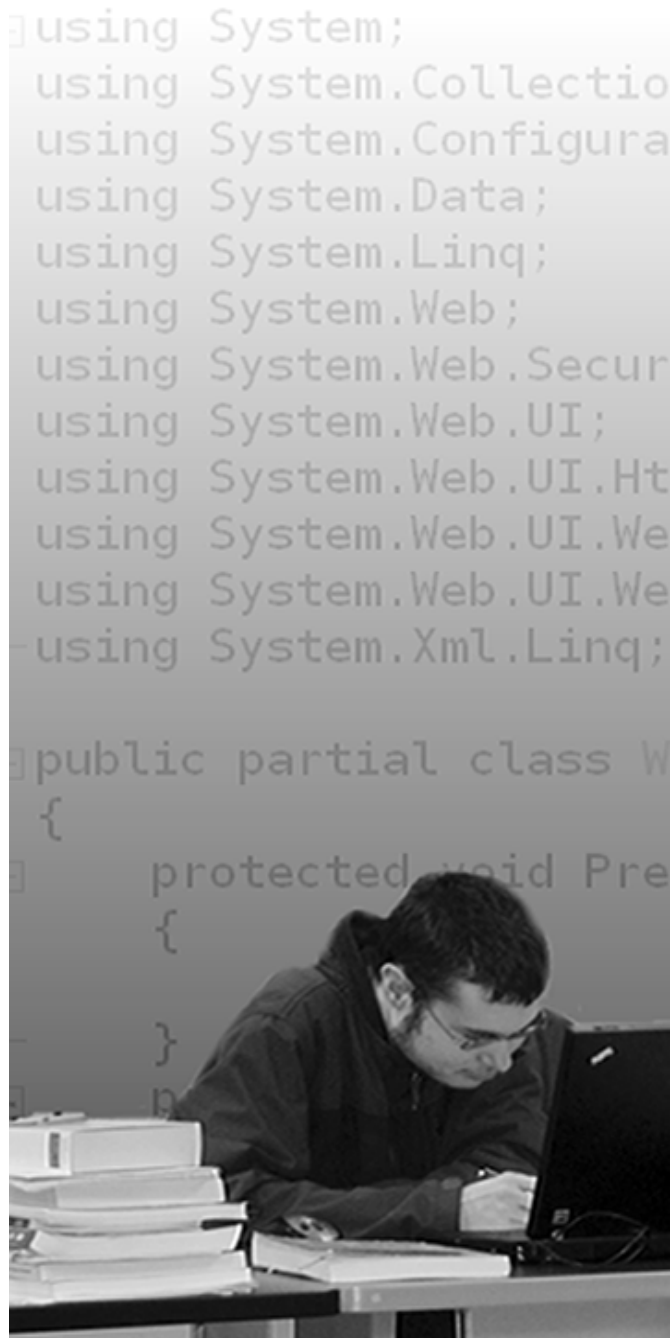


Web Development Technology



The mission of the Web Development Technology program is to prepare Alaskans with the skills required to develop interactive database-driven Web sites and computer programs.

Mark Ganser, Department Head

Telephone: (907) 224-6180

Fax: (907) 224-4400

E-mail: mark.ganser@avtec.edu

Brian Sarka, Instructor

Telephone: (907) 224-6183

Fax: (907) 334-2237

E-mail: brian.sarka@avtec.edu

Length of Course: 880ock hours (40 credit hours)

220 training days

Enrollment: Early September

Training Hours: 5:30 p.m. to 8:30 p.m., Monday through Friday

Certificate Level: Web Developer, Application Developer

Occupational Levels:

Web Developer

Application Developer

Combined Web Developer and Application Developer

Industry Certifications:

In addition to the Information Technology certificate, students can also prepare for and earn the following industry certifications:

CIW Associate Design Specialist

CIW Database Design Specialist

Microsoft Certified Professional

CompTIA Project+



CISCO SYSTEMS



Networking
Academy



CIW™
AUTHORIZED
ACADEMIC
PARTNER

Prerequisites:

Students must test at a 12th grade reading and 10th grade Math level prior to acceptance in the program.

TABE tests scores for this program must be:

Reading 609

Combined Math 579

Students should also have basic keyboarding skills and be competent using personal computer operating systems. A Web Developer Certificate is required for enrollment in the Application Developer classes. Contact AVTEC Admissions for details on testing. Students should also have good study habits and communication/interpersonal skills.

Web Development Technology

The AVTEC Web Development Technology program offers training in the skills required to be a Web development professional. These professionals specialize in creating the Web-based dynamic applications used by modern businesses. The courses in this program focus on four of the most desirable skills in the development industry – Web site development, programming, database development, and project management.

This 43 week comprehensive program utilizing industry standard curriculum is designed to prepare students for the role of Web developer.

The U.S. Bureau of Labor Statistics estimates that up to 57,000 additional employees with these skills will be needed by 2016.



Graduates of this program have demonstrated their ability to accomplish the tasks expected of a Web developer including analyzing the needs for which a solution is being developed, designing and creating Web sites, designing and creating databases used to store information, and creating the software that provides the functionality required of a Web application. Through numerous hands-on projects and by working with clients in the local community, graduates of this program will have created a portfolio of work demonstrating their abilities.

Students have the opportunity to prepare for popular industry certifications in Web site design, database design, and project management.

Students will develop skills with a variety of languages and tools such as JavaScript, PHP, object-oriented programming languages, SQL, integrated development environments, Adobe products, and industry standard planning and development methodologies.

Earn University of Alaska Credit While Attending AVTEC

Web Development Technology graduates are eligible to earn up to 15 University of Alaska college credits (depending on coursework completed) while attending AVTEC.

The following courses are part of our Tech Prep articulation agreement with the University of Alaska Fairbanks.

AVTEC Course: **UAF Information Technology Specialist - Associate of Applied Science** **Credits:**

IT 120 Introduction to Internet Technologies	CIOS F146 Using Internet Tools and Technologies	3
IT 126 Web Design and Development Tools	CIOS F256 Internet Authoring and Design	3
IT 122 Introduction to Programming	CIOS F270 Microcomputer Programming	3
IT 222 Web Applications	CIOS F271 Web Databases and Programming	3
IT 230 Externship	CIOS F276 Independent Project	3

Skills Upgrade and Industry Certification Training

Many of the courses offered by the Web Development Technology Program are appropriate for professional or personal development. Individual courses are available to learn how to use specific Web design tools or learn to write software. Courses are available to prepare for industry certification such as Database Design Specialist, Web Design Specialist, Project Management certification, or Microsoft certification.

While preparing for certification or developing new skills a student might also be eligible for college credit.

Certification Program Requirements

Successful completion of the first semester of the program is required for students to earn the AVTEC Web Developer Certificate. The first semester of the program is 21 weeks in duration. Successful completion of the second semester of the program is required for students to earn the AVTEC Application Developer Certificate. The second semester is 22 weeks. Successful completion of both semesters will result in a combined Web Developer and Application Developer occupational level.

Web Developer Certificate Requirements

The requirements for the Web Developer include the following courses: IT120 Foundations of Internet Technology, IT121 Web Design and Development Methods, IT 122 Introduction to Programming, IT124 JavaScript, IT126 Web Design and Development Tools, IT 222 Web Application Development, IT 130 Web Development Project, and CON Communication Skills. This is a total of 415 contact hours or 20 credit hours.

IT 120 Introduction to Internet Technology

Contact Hours: 60, Credit Hours: 3

Students will learn about key Internet technologies. They will learn the tasks involved in various Information Technology (IT) job roles. Information will be presented regarding Internet connection methods, basic Web browser use and configuration, and the use of databases on the Web. Students will learn about security measures that can keep your computer system and your personal information secure. Finally, students will study the fundamental elements of project management and the importance of acquiring these skills for all IT job roles.

Students will learn to develop Web pages using industry standard markup language.

IT 121 Web Design and Development Methods

Contact Hours: 40, Credit Hours: 2

In this course students will implement the latest strategies to develop Web sites. The course focuses on theory, design and Web construction, along with information architecture concepts, Web project management, scenario development and performance evaluations.

IT 122 Introduction to Programming

Contact Hours: 40, Credit Hours: 2

This course introduces students to computer programming. Students will learn the fundamental concepts and terminology of software application development and develop skills in designing and creating simple computer programs. The course assumes no programming background and provides an overview of the software development process in addition to introducing important programming constructs and methodologies.

IT 124 JavaScript

Contact Hours: 80, Credit Hours: 4

This course is an introduction to scripting as used in the

development of interactive Web pages. The use of the popular JavaScript language to design a platform-independent solution is presented in this course. Students learn how to write programs, script for the document object model, control program flow, validate forms, animate images, target frames, and create cookies.

IT 126 Web Design and Development Tools

Contact Hours: 60, Credit Hours: 3

In this course Students learn how to create and manage Web sites with tools such as Dreamweaver, Flash, Fireworks, and various multimedia and CSS standards.

IT 222 Web Application Development

Contact Hours: 80, Credit Hours: 4

The Web Application Development course expands on the information learned in previous courses to provide the skills needed to develop Web pages using client- and server-side languages that are capable of accessing database systems from Web applications, implementing applications using component technology, and creating Web pages that change based on user input.

IT 130 Web Development Project

Contact Hours: 40, Credit Hours: 1

The Web Development Project course allows students to pick a Web project, work with a client, and fully develop a solution. Students will have an opportunity to practice the skills they have learned throughout the semester by participating in actual development projects.

CON Communication Skills

Contact Hours: 15, Credit Hours: 1

Workplace communications training helps students improve skills and build self-confidence. Student's class hours are spent learning methods of communicating effectively in various situations such as in a team, with supervisors or with difficult coworkers.

INFORMATION TECHNOLOGY DEPARTMENT

Application Developer Certificate Requirements

Completion of the requirements for the AVTEC Web developer certificate is prerequisite for earning the AVTEC Application Developer Certificate. The course requirements for the Application Developer include the following: IT 220 Introduction to Project Management, IT 224 Object Oriented Programming, IT 226 Database Development, IT 226 Database Development Project, IT 228 Enterprise Development, IT 229 Enterprise Development Project, IT 230 Industry Externship, and CON Job Search/Interview Skills. This is a total of 465 contact hours or 20 credit hours.

IT 220 Introduction to Project Management

Contact Hours: 40, Credit Hours: 2

This course will offer an introduction to the purpose, activities, and tools used in project management, specifically as it relates to information technology projects. Students will explore a variety of projects and the results of those projects as they made use of different levels of project management. Students will also be introduced to the organizations and documents that comprise the state-of-the-art in project management.

IT 224 Object Oriented Programming

Contact Hours: 80, Credit Hours: 4

Object Oriented Programming is a four week course designed to teach students how to write programs using an object oriented language. Students will learn the language mechanics and object-oriented theory as it relates to a particular programming language. They will create Graphical User Interfaces (GUIs), connect to databases, and implement user input validation.

IT 226 Database Development

Contact Hours: 60, Credit Hours: 3

This course focuses on the planning and design of relational databases. Skills are developed in the areas of defining the structure of a database; employing Entity Relationship (ER) diagrams and normalization to optimize databases; building database client applications; and performing database maintenance and security administration.

IT 227 Database Development Project

Contact Hours: 20, Credit Hours: 0

Students will use the skills developed in IT 226 Database Development to design and create a database using a scenario and set of design specifications to guide their efforts.

IT 228 Enterprise Development

Contact Hours: 100, Credit Hours: 6

This course will focus on the development and deployment of complete Web-based software solutions tailored to business requirements by presenting knowledge and skills in building n-tier database business solutions using an object oriented programming language in conjunction with a distributed application architecture and Structured Query Language.

IT 229 Enterprise Development Project

Contact Hours: 60, Credit Hours: 2

Students will use the skills developed in IT 286 Enterprise Development to design and create a Web application using a scenario and set of design specifications to guide their efforts.

IT 230 Industry Externship

Contact Hours: 90, Credit Hours: 2

The Industry Internship course allows students to spend a minimum 90 hours observing and working with development professionals. Students will have an opportunity to practice the skills they have learned throughout the program by participating in actual development projects. The duration, location, and work hours required for IT 230 will depend on the externship opportunities that are available.

CON Job Search and Interview Skills

Contact Hours: 15, Credit Hours: 1

Job Search Class is designed to help students refine career goals, find job openings, complete job applications and develop resumes. Techniques in using the telephone to get employment information, and how to set up interviews are also covered. Interview Training provides students with videotaped practice interviews, and concludes with a simulated interview conducted by employers in the community who volunteer their time to support AVTEC in developing a well-trained work force.