

# CIT, WEB APPLICATIONS DEVELOPMENT SPECIALTY, CERTIFICATE OF TECHNOLOGY



## Program Information

Are you intrigued by the internet? Do you want to design fantastic web sites? If so, San Jacinto College's Web Application program might be the right path for you! With a focus on web technologies such as PHP, SQL, and JavaScript, our program teaches students the necessary skills to work in the challenging field of web site creation with a primary focus on web-based programming concepts and web site design.

At San Jacinto College, the web page development curriculum:

- Is designed to provide the student with basic web applications development skills, beginning with HTML and CSS technologies;
- Places an emphasis on designing interactive web applications to communicate with data sources and run across multiple platforms; and
- Offers two paths to earn a Certificate of Technology:
  - The Web Applications Development Specialty Certificate of Technology is designed for students who wish to focus on back-end programming skills utilizing technologies such as PHP and JavaScript to create interactive web applications.
  - The Web Design and Implementation Specialty Certificate of Technology is designed for students who wish to focus on front-end design and web page creation through the utilization of graphic-based software such as Adobe Photoshop, Illustrator, and DreamWeaver.
- Most courses required for either of these certificates will also apply toward the Web Applications Development Specialty Associate of Applied Science (AAS) degree. The College structured both certificates so students can complete them in three semesters. After earning their Certificate of Technology, web students can then earn the AAS degree by completing only one additional semester of study consisting of an additional five courses (15 semester credit hours).

## Additional Information

Note for transfer students: Some of the courses for this degree will be accepted for transfer to certain colleges/universities. The College encourages students to check with a counselor for details on course transferability. San Jacinto College offers two courses of study in this area that include computer information technology and computer science.

## Career Opportunities

An AAS degree or Certificate of Technology in Web Development prepares students for a career as a:

- Webmaster,
- Web specialist,
- Web applications developer,
- Web designer, or
- Mobile apps developer.

## Earning Potential

Web developer: \$72,463<sup>1</sup> per year

<sup>1</sup> Source: [texaswages.com](http://texaswages.com) (<http://texaswages.com>), median salary Gulf Coast region, 2021

For more information, students may contact 281-998-6350, x3502.

## Campus

South Campus

## Information

The Computer Information Technology (CIT) program is designed primarily for students seeking an Occupational Certificate, Certificate of Technology, or Associate of Applied Science (AAS) degree. Students can expect to complete most CIT certificates in three semesters and the AAS degrees in as few as four semesters. For those students who have already fulfilled general education requirements, it may be possible to finish degree course work even sooner. It is generally recommended that students complete the 21 semester credit hour Computer Information Technology (CIT) foundations Occupational Certificate before continuing into a Certificate of Technology or AAS degree. Most courses in this Occupational Certificate will apply toward the other CIT certificates and AAS degrees.

The CIT curriculum provides the graduate with the knowledge and in-demand applied technical skills needed to enter computer-related occupations in the business/industry job market. Certificates and AAS degrees are available in the following areas: Applications Programming, Desktop Support and Network Administration, Information Technology Cyber Security, Simulation and Game Design, Network Administration Cisco, Cloud Computing, and Web Applications Development.

- The Applications Programming Specialty is for students interested in developing computer programs (designing, coding, testing, and debugging), both stand-alone and web-based, in languages such as C++ and Java as well as gaining skills in the use of Python and SQL. Electives may include courses in C#, Game Design, JavaScript, and mobile app programming. Emphasis is placed on applying the techniques and procedures learned in providing software solutions for both business-related and practical computer problems that are robust, error-free, and easy to use.
- In Desktop Support and Microsoft Network Administration, a student can choose between a track with emphasis on computer hardware (installing, maintaining, repairing, and upgrading) and software support (installing and configuring) or one with focus on installing, configuring, and maintaining computer networks. This program of study prepares students for CompTIA's A+ and Network+ exams as well as other widely recognized industry certifications. Support and

network graduates are invaluable in keeping businesses running smoothly.

- The Cloud Computing program provides individuals education, training, the knowledge, skills, and concepts necessary to serve as a cloud support technician. Upon completion of the program, students will develop the fundamental skills necessary to support and manage infrastructure and workloads on cloud platforms such as Amazon Web Services (AWS) and Microsoft Azure.
- The Cyber Security program prepares students for entry level security certifications such as Security+. It lays the ground work for higher level certifications. As an Information Technologist, you can help keep hackers, viruses, and terrorists from intruding and damaging computers and networks.
- The Simulation and Game Design program is designed for students who are interested in advanced programming areas, as in simulations, game programming, program testing, or multimedia programming.
- In the Network Administration Cisco Specialty, emphasis is on the design, implementation, and administration of local and wide-area router networks.
- The Web Applications Development program prepares students for entry-level positions in website design, web-based applications development, and website administration.
- The CIT Industry Certification program is intended for students with industry experience in one or more of the following areas of study: beginning network administration, Cisco, and advanced information technology security. These certificates enable students to supplement their current job skills and obtain industry certifications, if desired. Each industry certificate consists of only the courses required to obtain a specific certification.

Note for transfer students: Due to variations in requirements at four-year colleges and universities, students desiring a bachelor's degree in Computer Science are strongly advised to consult a CIT Department Chair at San Jacinto College and at the institution to which they wish to transfer. This communication regarding transfer degree plans with both computer department heads will help to ensure the transition process is as smooth as possible.

Students enrolling into San Jacinto College programs with external learning experiences (i.e., clinical, practicum, externship, cooperative, etc.) will be required to comply with the immunization requirements and policies of the clinical/external learning sites to engage in all clinical/external learning experiences. Vaccination requirements at clinical/external learning sites are implemented pursuant to the independent authority of such facilities and are not mandated by San Jacinto College. Failure to meet the immunization requirements mandated by clinical/external learning sites may limit a student's ability to complete the program and/or may delay the student's graduation date. San Jacinto College does not process exemptions, and students should address potential vaccination exemptions directly with the clinical/external learning site.

## Web Development

The College has divided the Web Development program into two major areas: Web Page Programming (back end) and Web Page Design (front end). Web Page Programming places an emphasis on designing interactive web applications to communicate with data sources and run across multiple platforms. Web Page Design focuses on the aesthetic layout and artistic style of the website through the utilization of graphic-based software for web page creation.

## Certificate of Technology

The Web Applications Development Specialty Certificate of Technology is designed for students who desire to earn a credential after three semesters of study. All courses required for this certificate apply toward the Web Applications Development Specialty Associate of Applied Science degree. The following curriculum is designed to provide the student with basic web applications development skills. Common job titles for this certificate include webmaster, web specialist, web application developer, and web designer.

## Plan of Study

4IT-WBDV

| First Term                   |  | Credits   |
|------------------------------|--|-----------|
| ITSE 1329                    | Programming Logic and Design   | 3         |
| ITSC 1309                    | Integrated Software Applications I   | 3         |
| ITSC 1319                    | Internet/Web Page Development  | 3         |
| ITSW 1307                    | Introduction to Database   | 3         |
| ITNW 1325<br>or ITCC 1314    | Fundamentals of Networking Technologies<br>or CCNA 1: Introduction to Networks | 3         |
| <b>Credits</b>               |  | <b>15</b> |
| Second Term                  |  |           |
| IMED 1316                    | Web Page Design I  | 3         |
| IMED 1341                    | Interface Design with Photoshop  | 3         |
| ITSE 1359                    | Introduction to Scripting Languages  | 3         |
| ITSE 2313                    | Web Authoring  | 3         |
| ITSC 1305                    | Introduction to PC Operating Systems   | 3         |
| <b>Credits</b>               |  | <b>15</b> |
| Third Term                   |  |           |
| IMED 2311                    | Web Portfolio Development  | 3         |
| ITSE 1333                    | Mobile Applications Development  | 3         |
| Select one of the following: |  | 3         |
| ITSC 2364                    | Practicum - Computer and Information Sciences, General                         |           |
| Approved Elective (p. 2)     |  |           |
| <b>Credits</b>               |  | <b>9</b>  |
| <b>Total Credits</b>         |  | <b>39</b> |

Capstone Experience: IMED 2311 Web Portfolio Development

## Approved Electives

| Code      | Title                      | Credits |
|-----------|----------------------------|---------|
| ITSC 1307 | UNIX Operating System I    | 3       |
| ITSE 1345 | Introduction to Oracle SQL | 3       |
| IMED 2315 | Web Page Design II         | 3       |