CIT, APPLICATIONS PROGRAMMING SPECIALTY, ASSOCIATE OF APPLIED SCIENCE

Program Information

Do you want to know how software works? Do you want to write your own programs and apps? How would you like to design a program, write it, test it, and see it come to life? If so, San Jacinto College's Computer Information Technology (CIT) program might be the right program for you! It is designed to prepare graduates to continue to the university to complete a computer information systems or computer science degree. San Jacinto College's CIT curriculum:

- Is designed to provide the student with an understanding of the principles of information technology, experience with techniques of information technology, and competence in the application of computer information systems;
- Places an emphasis on computer information technology and the use of computer languages in the solution of business and some scientific problems; and
- Will prepare entry-level application developers for employment in the area of business software application development.

Graduates of this program will have designed, written, tested, and debugged programs in several major programming languages in both individual and team-oriented settings.

Additional Information

For students seeking a Certificate of Technology and/or Associate of Applied Science (AAS) degree, the College recommends completion of the 21-credit hour CIT foundations Occupational Certificate before continuing into a Certificate of Technology or AAS degree. The classes in the CIT foundations certificate will apply toward most of the other CIT Certificates of Technology and AAS degrees. Due to variations in requirements at four-year colleges and universities, the College strongly advises students desiring to pursue a bachelor's degree in Computer Science to consult the CIT Department Chair at San Jacinto College and at the institution to which they wish to transfer to review the appropriate transfer degree plans to the designated university.

Career Opportunities

Students who graduate from San Jacinto College with a degree or certificate in programming pursue careers as:

- Software Developers,
- Computer Systems Analysts,
- Entry (Junior Level) Programmers,
- Programmer Analysts,
- Software Applications Specialists,
- Software Designers, and
- Software/Application Support.

For more information, students may contact, Central campus, 281-476-1836; North campus, 281-998-6350, x7765; or South campus, 281-998-6350, x3502

Campuses

Central Campus
North Campus
South Campus

San Jac Online

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 Cybersecurity, 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 Cybersecurity 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.

Associate of Applied Science Degree

Most employers require an associate degree for entry-level positions in this field. Common job titles for this degree are Entry-level Application Programmer and Software Developer.

Students who wish to pursue a bachelor's degree after graduation from San Jacinto College may want to consider programs in the Western Governors University (WGU) College of Information Technology. WGU will accept credit for students with the following AAS degrees: CIT Applications Programming Specialty; CIT Desktop Support and Microsoft Network Administration; CIT Information Technology Cyber Security Specialty; CIT Network Administration Cisco Specialty; CIT Simulation and Game Design; CIT Web Applications Development Specialty. Interested students may find more information on the WGU website (https://partners.wgu.edu/Pages/transfer-iid-1154.html).

Plan of Study

3IT-APPL

First Term		Credits
ITSC 1305	Introduction to PC Operating Systems	3
ITSC 1309	Integrated Software Applications I	3
ITNW 1325 or ITCC 1314	Fundamentals of Networking Technologies or CCNA 1: Introduction to Networks	3
ITSE 1329	Programming Logic and Design	3
ITSC 1319	Internet/Web Page Development	3
	Credits	**15**
Second Term		
ITSE 1359	Introduction to Scripting Languages	3
ITSE 1302	Computer Programming	3
ITSW 1307	Introduction to Database	3
ENGL 1301	Composition I	3
SPCH 1321	Business and Professional Speech	3
	Credits	**15**
Third Term		
ITSE 2359	Advanced Computer Programming	3
ITSC 1325	Personal Computer Hardware	3
Approved Elective (p. 3)		3
Select one of the following:		3
Mathematics		
Life and Physical Sciences (Natural Science)		
ENGL 2311 or ENGL 1302	Technical and Business Writing or Composition II	3
	Credits	**15**
Fourth Term		
SOCI 1301	Introduction to Sociology	3
Approved Elective (p. 3)		3
Language, Philosophy and Culture (Humanities) or Creative Arts (Fine Arts)		3
ITSE 2321	Object-Oriented Programming	3
Select one of the following:		3
ITSC 2364	Practicum - Computer and Information Sciences, General	
Approved Elective (p. 3)		
	Credits	**15**
	Total Credits	**60**

Capstone Experience: ITSE 2321 Object-Oriented Programming

**Students must be Texas Success initiative (TSI) complete in order to graduate: Math level 8.

Approved Electives

Code	Title	Credits
GAME 1303	Introduction to Game Design and Development	3
ITSC 1307	UNIX Operating System I	3
ITSC 1321	Intermediate PC Operating Systems	3
ITSE 1331	Introduction to Visual BASIC Programming	3
ITSE 2309	Database Programming	3
ITSY 1342	Information Technology Security	3