CIT, INFORMATION TECHNOLOGY SPECIALIST, ASSOCIATE OF APPLIED SCIENCE

Overview

The Information Technology Specialist Associate of Applied Science (AAS) program offers students a robust foundation in IT principles and hands-on technical skills, preparing them for diverse roles in the rapidly growing field of information technology. The program begins with foundational courses that cover critical topics such as hardware and software support, operating systems, networking, and cybersecurity. After completing the foundational courses, students will choose one of three specialization areas to tailor their education to specific career goals:

- **Systems Administration:** Focuses on managing and maintaining IT systems, servers, and virtualization technologies to ensure operational efficiency and reliability.
- **Cloud Administration:** Emphasizes deploying, configuring, and managing cloud-based infrastructures and services, preparing students for roles in the dynamic world of cloud computing.
- **Cisco Networking and Security:** Provides in-depth knowledge of network design, implementation, and security, with a focus on Cisco technologies and certifications.

This flexible structure allows students to gain broad IT expertise while also specializing in a field that aligns with their interests and career aspirations. Graduates of this program will be well-prepared for immediate entry into the workforce or for transfer into advanced programs, such as the Bachelor of Applied Technology (BAT) in Cybersecurity or related fields.

Industry Certifications

Students in the Information Technology Specialist AAS program are prepared to pursue a variety of industry-recognized certifications that validate their skills and enhance their employability. Certifications may include:

- CompTIA A+
- CompTIA Network+
- CompTIA Security+
- CompTIA Cloud+
- CompTIA Server+
- CompTIA Linux+
- Microsoft Certified: Azure Administrator Associate
- Cisco Certified Network Associate (CCNA)

These certifications are widely recognized in the IT industry and are highly valued by employers.

Career opportunities

Graduates of the Information Technology Specialist AAS program are prepared to pursue a variety of roles depending on their chosen specialization:

- **Systems Administration Specialization:**
    - IT Support Specialist
    - Systems Administrator
    - Server Support Technician
    - Network Server Administrator
- **Cloud Administration Specialization:**
    - Cloud Systems Administrator
    - Cloud Support Specialist
    - Cloud Operations Technician
    - Cloud Security Specialist
    - Junior Cloud Architect
- **Cisco Networking and Security Specialization:**
    - Network Security Analyst
    - Cisco Network Administrator

These roles span a variety of industries, including technology, healthcare, finance, education, and government, where IT expertise is essential for operational success.

Earning Potential

Cloud Systems Administrator (https://www.salary.com/research/salary/recruiting/cloud-administrator-salary/houston-tx/): $130,530 per year[1]

Computer Network Support Specialist (https://www.salary.com/research/salary/posting/computer-network-support-specialists-salary/houston-tx/): $123,135 per year[1]

Cloud Security Specialist (https://www.salary.com/research/salary/position/cloud-security-specialist-salary/houston-tx/): $70,561 per year[1]

IT Support Specialist (https://www.salary.com/research/salary/listing/it-support-specialist-salary/houston-tx/): $137,584 per year[1]

Systems Administrator (https://www.salary.com/research/salary/listing/systems-administrator-salary/houston-tx/): $116,340 per year[1]

Network Server Administrator (https://www.salary.com/research/salary/position/network-server-administrator-salary/houston-tx/): $111,289 per year[1]

[1] Source: salary.com (https://www.salary.com/), average salary for Houston, Tx as of May 1, 2025

For more information, students may contact Central Campus, 281-991-2608; North Campus, 281-998-6350, x7242; or South Campus, 281-922-3424.

Campuses

Central Campus

North Campus

South Campus

Information

The Information Technology Specialist Associate of Applied Science (AAS) program is designed for students seeking comprehensive skills to build, support, and manage IT systems in today's dynamic technology landscape. This degree program can typically be completed in four semesters, and for students who already hold industry certifications such as CompTIA A+, Network+, or Server+, it may be possible to finish even sooner. It is generally recommended that students complete the 27 semester credit hour Computer Information Technology (CIT) Foundations Certificate of Technology before enrolling in this program, as many of those courses provide essential groundwork and apply toward this degree, as well as other CIT certificates and advanced programs like the Bachelor of Applied Technology (BAT).

The Information Technology Specialist AAS program equips students with advanced technical knowledge and practical experience in IT, preparing them for specialized roles depending on their chosen area of focus. After completing foundational courses, students can choose one of three specializations to tailor their education to their career goals:

- **Systems Administration:** Focused on managing IT systems, servers, and virtualization technologies to ensure operational efficiency and reliability.
- **Cloud Administration:** Emphasizing cloud-based infrastructure deployment, management, and optimization, with platforms like AWS and Microsoft Azure.
- **Cisco Networking and Security:** Specializing in network design, implementation, and security using Cisco technologies and certifications.

This program places special emphasis on:

- Configuring and maintaining IT systems, servers, and networks to ensure security and reliability.
- Supporting advanced IT environments, including virtualization and cloud computing platforms.
- Gaining experience in IT project management and incident response to address real-world challenges effectively.
- Preparing for industry-recognized certifications, including CompTIA A+, CompTIA Network+, CompTIA Security+ and more.

The Information Technology Specialist AAS degree provides a direct pathway to a variety of IT careers. Upon completion, students may qualify for positions such as:

- IT Support Specialist
- Systems Administrator
- Cloud Support Specialist
- Cisco Network Administrator

Graduates will find opportunities in industries that require robust IT systems and infrastructure management, including healthcare, finance, education, government, and technology.

If your selected courses or program of study include clinical, practicum, externship, or cooperative learning components at external sites, you must meet all immunization or policy requirements outlined by the host facility. These requirements are determined by the external site's independent authority rather than by San Jacinto College. Failure to comply with these requirements can prevent you from completing your required external learning experiences and may delay graduation. Students seeking exemptions must address these directly with the external facility, as San Jacinto College does not process immunization exemptions.

By choosing the Information Technology Specialist Associate of Applied Science, you gain a versatile and comprehensive education that prepares you to succeed in a variety of IT roles. Whether you are looking to launch a new career or build on existing skills, this program positions you for success in the evolving world of information technology.

Plan of Study

3IT-ITSPEC

First Year

First Term		**Credits**
ITSC 1325	Personal Computer Hardware	3
ITSC 1305	Introduction to PC Operating Systems	3
ITNW 1309	Fundamentals of Cloud Computing	3
ITNW 1325 or ITCC 1314	Fundamentals of Networking Technologies or CCNA 1: Introduction to Networks	3
ENGL 1301	Composition I	3
	Credits	**15**
Second Term		
ITSY 1342	Information Technology Security	3
ITSE 1329	Programming Logic and Design	3
ITSC 1309	Integrated Software Applications I	3
ITNW 1313	Computer Virtualization	3
ITSE 1359	Introduction to Scripting Languages	3
	Credits	**15**
Second Year		
First Term		
Choose a Specialization below [1]		15
Cisco Specialization		
Systems Administration Specialization		
Cloud Specialization		
	Credits	**15**
Second Term		
ENGL 1302 or ENGL 2311	Composition II or Technical and Business Writing	3
Mathematics		3
Social and Behavioral Sciences or Government/Political Science or American History		3
Language, Philosophy and Culture (Humanities) or Creative Arts (Fine Arts)		3
Select one of the following:		3
SPCH 1311	Introduction to Speech Communication	
SPCH 1315	Public Speaking	
SPCH 1318	Interpersonal Communication	

SPCH 1321	Business and Professional Speech	
	Credits	**15**
	Total Credits	**60**

Cisco Specialization

Code	Title	Credits
ITCC 1444	CCNA 2: Switching, Routing and Wireless Essentials	4
ITCC 2420	CCNA 3: Enterprise Networking, Security, and Automation	4
ITCC 2441	CCNA Security	4
Select one of the following:		3
ITSC 2364	Practicum - Computer and Information Sciences, General	
ITSY 2345	Network Defense and Countermeasures	
ITSY 2301	Firewalls and Network Security	
ITSC 1315	IT Project Management	
Total Credits		**15**

Capstone Experience: ITCC 2441 CCNA Security

Systems Administration Specialization

Code	Title	Credits
ITSC 1321	Intermediate PC Operating Systems	3
ITNW 1354	Implementing and Supporting Servers	3
ITNW 1353	Supporting Network Server Infrastructure	3
ITSY 2300	Operating System Security	3
Select one of the following:		3
ITSC 2364	Practicum - Computer and Information Sciences, General	
ITSY 2341	Security Management Practices	
ITSY 2342	Incident Response and Handling	
ITSW 1307	Introduction to Database	
ITSC 1315	IT Project Management	
Total Credits		**15**

Capstone Experience: ITNW 1353 Supporting Network Server Infrastructure

Cloud Specialization

Code	Title	Credits
ITNW 1336	Cloud Deployment & Infrastructure Management	3
ITNW 2327	Advanced Cloud Concepts	3
ITNW 1354	Implementing and Supporting Servers	3
Select two of the following:		6
ITSC 2364	Practicum - Computer and Information Sciences, General	
ITSC 1315	IT Project Management	
ITSC 1316	Linux Installation and Configuration	
ITSY 2300	Operating System Security	
ITSY 2341	Security Management Practices	
ITSY 2342	Incident Response and Handling	
ITNW 1353	Supporting Network Server Infrastructure	
Total Credits		**15**

Capstone Experience: ITNW 2327 Advanced Cloud Concepts

[1] For the 15 semester credit hours of the third term, students follow one of the three specializations: Cisco or Systems Administration or Cloud.