



Degree Guide:

Information Technology Systems Administration, Associate in Applied Science-Transfer (AAS-T) Degree

Program

[Information Technology \(IT\)](#)

Degree Type

Professional Technical Degree

Offered Online

Yes

Program Coordinator

Alex Markunas

(360) 417-6270

amarkunas@pencol.edu

Program Description

The Associate in Applied Science-Transfer (AAS-T) degree in Information Technology Systems Administration trains students, using industry-based skill standards. Students will design, implement, secure and support Microsoft, Unix/Linux and other industry standard network, client and server systems. Students will learn about the fundamental business context where IT systems function including business communication skills. Classroom instruction and practical experiences are combined into a course of study that provides students with broad exposure to the principles of network management and basic a basic understanding of the current information technology business environment.

Program Length: 6 Quarters

Program Code: SYASAAAS

Career Opportunities and Earnings

The Information Technology field continues to evolve. Information Technology plays an integral part in achieving management goals and objectives. Network and computer support personnel with experience and education earn living wages that vary depending on many factors, including but not limited to: specific skill set, supply and demand, location, and current business and economic conditions. Job openings vary across the country.

- Network engineer
- Systems administrator
- Systems support specialist

For current employment and wage estimates, please visit and search for the relevant occupational term: [bls.gov/oes](https://www.bls.gov/oes).

Program Outcomes

When this program is completed, the student will be able to:

- Determine the type of software or hardware necessary to complete an objective; understand the functions of different operating systems
- Access information from various storage mediums to locate and provide access to information in subdirectories
- Consider ideas that conflict with individual value systems
- Design, configure, troubleshoot and deploy computer networks



- Use an operating system to access a variety of software
- Solve problems using the appropriate operating system utilities; apply systematic approaches and logic to solving problems
- Synthesize and apply information to meet an identified need
- Ask questions and give answers using discipline-specific vocabulary
- Respond to a heterogeneous technology climate
- Plan, install, configure and manage resources; connect and run applications; monitor, optimize and troubleshoot network software and hardware
- Provide organizations a safe, secure, and redundant information system

Special Features

- This program helps prepare the student for a life-long learning process that accommodates rapidly changing technologies
- This program can be completed online, or face to face depending on the mode that best fits each student’s needs
- The practice examination used in this program is based on content that follows guidelines established by industry leaders

Program Goals

For the education program to be effective, the curriculum is designed to promote the following outcomes:

- Prepare students for a variety of Information Technology, network support, computer support and business related job opportunities
- Prepare students for professional certification exams, where applicable
- Prepare students to communicate effectively with management, including Chief Information Officers (CIO), and Chief Financial Officers (CFO)

Program Prerequisites

Students entering this program should have good familiarity with computer software and hardware in the Windows or MAC environment. College level skills in English and math (eligibility for courses numbered 100 or higher) are required before registering for the English, math, or applied math courses in this program. Students may need to complete prerequisite coursework. The placement test will help determine placement level if not known. Previous coursework may also indicate placement level.

Approximate Additional Costs

- Books, supplies and miscellaneous fees (per quarter): \$200-\$300
- Computer/software: \$1,500-\$2,500 (optional, recommended)

Sample Schedule

This sample schedule is provided as a guide for a full-time student starting in fall quarter whose goal is to earn the AAS-T. The typical student schedule is based on entering the program during the fall quarter, however some programs allow students to enter in the winter or spring as well. Since not all do, please confirm with an advisor whether this program must be started during a specific quarter or not.

First Quarter (Fall)

Catalog #	Course Title	Credits
CS 100	Introduction to Computer Science	5
IT 107	Introduction to Networking	5
IT 111	Information Technology Foundations I	5



Second Quarter (Winter)

Catalog #	Course Title	Credits
IT 155	Cloud Computing Essentials	5
IT 211	Information Technology Foundations II	5
IT 260	Introduction to Unix/Linux Systems Administration	5

Third Quarter (Spring)

Catalog #	Course Title	Credits
CSIA 110	Introduction to Cybersecurity and Cybercrime	5
IT 114	Database Design and Implementation	5
IT 225	Windows Server and Windows Domains	5

Fourth Quarter (Fall)

Catalog #	Course Title	Credits
IT 207	Advanced Networking and Network Security	5
IT 275	Scripting and Automation	5
IT 285	Cloud Infrastructure and DevOps	5

Fifth Quarter (Winter)

Catalog #	Course Title	Credits
CSIA 185	Cybersecurity I: Risks, Control and Encryption	5
ENGL& 101	English Composition I	5
MATH& 107 or above		5

[MATH&146](#) is recommended



Sixth Quarter (Spring)

Catalog #	Course Title	Credits
Advisor Approved Elective		5
CSIA 290	Cybersecurity Capstone	5
Social Sciences		5

Your personal educational plan will vary based on many factors including:

- The quarter you begin
- How many classes/credits you plan to take in each quarter
- Your math and English placement; Learn more about placement options by visiting the [Assessment and Placement website](#).
- If you start in our [Transitional Studies](#) program

Total Credits **90**