

COMPUTER INFORMATION TECHNOLOGY ATC

The Advanced Technical Certificate (ATC) in Computer Information Technology is a three-semester program of study designed to prepare students for diverse career opportunities in the planning, implementation, security, and maintenance of computer and network communication systems for businesses of all sizes. The program builds the skills needed for roles in technical support, cybersecurity, cloud administration, network administration, and server administration, with training aligned to internationally recognized industry certifications and proprietary systems such as CompTIA, Microsoft, Cisco, Juniper, and Ubiquiti.

Students gain hands-on experience in areas such as microcomputer systems, data communications and security, cybersecurity fundamentals, operating systems, hardware and software analysis, cloud computing, virtualization, and troubleshooting techniques. The curriculum emphasizes the application of these skills in real-world settings using industry-standard tools and best practices.

Note: Some careers in this field may involve background checks and physical requirements that could impact a student's ability to perform certain job functions. Please consult with a program advisor for more information.

Entrance Requirements

- The program admits students each semester (Fall and Spring).
- Enrollment priority is on a first-come, first-served basis as determined by the student's faculty advising date.
- Writing Placement Exam (WPE) score of 2 or higher, or equivalent college placement exam scores.

Upon successful completion of the Computer Information Technology ATC program, students will be able to:

- Attempt industry certification exams including CompTIA A+, ITF+ (IT Fundamentals), Security+, Linux+, Server+, Cloud+; and Cisco CCST.
- Apply industry-standard safety practices and protocols in IT environments, including proper handling of hardware, electrostatic discharge precautions, and cybersecurity hygiene.
- Use diagnostic tools and test equipment to troubleshoot and maintain computer systems and networks.
- Install, configure, upgrade, and maintain microcomputer hardware, peripherals, and operating systems, including Windows and Linux environments.
- Deploy and support client- and server-based software applications in business and enterprise settings.
- Configure and secure basic to intermediate Linux systems, utilizing command-line tools for file management, process control, user and group permissions, and shell scripting.
- Implement core networking concepts such as IP addressing, subnetting, VLANs, switching, and routing technologies – including basic configuration of Cisco routers and switches.
- Design and troubleshoot local area networks (LANs), wireless LANs (WLANs), and structured cabling systems to meet business and technical requirements.
- Apply network security principles including access control, authentication, encryption, and endpoint protection, and perform risk assessments and vulnerability mitigation.
- Understand and apply cybersecurity concepts such as malware analysis, vulnerability assessment, cryptography, identity protection, social engineering prevention, and incident response.
- Work with cloud computing environments, including virtualization, cloud deployment models, resource provisioning, and infrastructure-as-a-service (IaaS) concepts.

Minimum Grade Requirement

- Students must earn a grade of C or higher in all required IT courses to receive credit for program graduation.

General Education Requirement

Code	Title	Credits
Written Communication		
Select one of the following:		6.00
ENGL-101 & ENGL-102	WRITING AND RHETORIC I and WRITING AND RHETORIC II	
ENGL-109	COLLEGE WRITING AND RESEARCH	
Oral Communication		
Select one of the following:		3.00
COMM-101	FUNDAMENTALS OF ORAL COMMUNICATION	
COMM-203	SMALL GROUP COMMUNICATION	
COMM-204	PUBLIC SPEAKING	

Mathematical Ways of Knowing

Select one of the following: 3.00-5.00

MATH-123	MATH IN MODERN SOCIETY
MATH-130	FINITE MATHEMATICS
MATH-137	ALGEBRA, TRIG AND STAT WITH APPLICATION
MATH-140	ALGEBRAIC REASONING AND PROBLEM-SOLVING
MATH-143	PRECALCULUS I: ALGEBRA
MATH-147	PRECALCULUS
MATH-153	STATISTICAL REASONING
MATH-160	BRIEF CALCULUS
MATH-170	CALCULUS I
MATH-254	STATISTICAL METHODS
MATH-257	MATHEMATICS FOR ELEMENTARY TEACHERS II
MTHPT-130	FINITE MATHEMATICS
MTHPT-137	MATH FOR TECHNOLOGY
MTHPT-153	STATISTICAL REASONING

Scientific Ways of Knowing

Select one of the following: 3.00-4.00

BIOF-100	INTRODUCTION TO BIOINFORMATICS
BIOL-100	CONCEPTS OF BIOLOGY
BIOL-120	PLANTS AND PEOPLE
BIOL-123	BIOLOGY IN FILM
BIOL-175	HUMAN BIOLOGY
BIOL-227	HUMAN ANATOMY AND PHYSIOLOGY I
CHEM-100	CONCEPTS OF CHEMISTRY
CHEM-105	GENERAL, ORGANIC AND BIOCHEMISTRY
CHEM-111	PRINCIPLES OF CHEMISTRY I
ENGR-108	SEMICONDUCTORS, SCIENCE, AND SOCIETY
FSCI-101	INTRODUCTION TO FORENSIC SCIENCE
GEOL-101	PHYSICAL GEOLOGY
GEOL-120	INTRODUCTION TO EARTH SYSTEMS
GIS-271	GEOGRAPHIC INFORMATION SYSTEMS
ID-160	WATER AND ENERGY
ID-240	INTEGRATED SCIENCE II
NS-140	INTEGRATED SCIENCE I
NS-150	INTRODUCTION TO NATURAL SCIENCES
NS-174	NATURAL SCIENCE FOR ELEMENTARY EDUCATOR
PHYS-111	GENERAL PHYSICS I
PHYS-112	GENERAL PHYSICS II
PHYS-171	PHYS SCIENCES FOR ELEMENTARY EDUCATORS
PHYS-205	DESCRIPTIVE ASTRONOMY

Social & Behavioral Ways of Knowing

Select one of the following: 3.00

ANTH-102	CULTURAL ANTHROPOLOGY
ANTH-120	WORLD PREHISTORY
ANTH-170	INTRODUCTION TO NATIVE AMERICAN STUDIES
ECON-201	PRINCIPLES OF MACROECONOMICS
ECON-202	PRINCIPLES OF MICROECONOMICS
GEOG-102	INTRODUCTION TO GEOGRAPHY
HIST-101	WORLD HISTORY I
HIST-102	WORLD HISTORY II
HIST-111	UNITED STATES HISTORY I

HIST-112	UNITED STATES HISTORY II
HRPT-184	DIVERSITY IN ORGANIZATIONS
HRPT-185	HUMAN RELATIONS IN ORGANIZATIONS
POLS-101	AMERICAN NATIONAL GOVERNMENT
POLS-237	INTERNATIONAL POLITICS
POLS-285	COMPARATIVE GOVERNMENT
PSYC-101	INTRODUCTION TO GENERAL PSYCHOLOGY
PSYC-205	LIFESPAN DEVELOPMENTAL PSYCHOLOGY
SOC-101	INTRODUCTION TO SOCIOLOGY
SOC-102	SOCIAL PROBLEMS

Total Credits	18.00-21.00
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Code	Title	Credits
General Education Credits		18.00
Program Requirements		
Take one of the following:		
IT-231	INFORMATION SYSTEMS I	4.00
IT-232	INFORMATION SYSTEMS II	4.00
IT-233	INFORMATION SYSTEMS III	4.00
IT-251	NETWORKING I (CCNA 1: INTRODUCTION TO NETWORKS)	4.00
IT-252	NETWORKING II (CCNA: SWITCHING, ROUTING, AND WIRELESS ESSENTIALS)	4.00
IT-271	CYBERSECURITY I	4.00
IT-272	CYBERSECURITY II	4.00
IT-273	CYBERSECURITY III	4.00
Total Credits		50.00