

APPLIED INFORMATION TECHNOLOGY M.S.

Degree: Master of Science
<https://www.towson.edu/fcsm/departments/computerinfosci/grad/applied-information-technology/>

Program Director: Cheryl Brown
 Phone: 410-704-4966
 Email: cbrown@towson.edu

Program Coordinator: Andrea Chenowith
 Phone: 410-704-4309
 Email: achenowith@towson.edu

Applied Information Technology is the study, design, development, implementation and support of computer-based information systems to address real-world problems. This program provides graduate-level education in IT for students preparing to enter the high-tech work force and those already in the work force who need to update and enhance their skills. We offer courses in areas such as systems development, IT project management, Internet application development, and IT and business analysis. Post-baccalaureate certificates in Computer Forensics, Health Information Technology, Internet application development, Information security and assurance, Information systems management, Networking technologies, Software engineering and Database management systems are integrated with the M.S. degree program.

Admission Requirements

- A baccalaureate degree from a regionally accredited college or university**
- A minimum undergraduate GPA of 3.00 for full admission and 2.75 for conditional admission
- Minimum TOEFL score of 550 (where applicable)

These programs are intended for students who have a bachelor's degree in information technology, computer science, computer information systems or a related field who will enter the program for advanced studies; students who have a bachelor's degree in a field not listed above who are already employed in the IT field and are seeking additional academic studies for professional growth or career advancement; and students who have a bachelor's degree in disciplines other than IT who are seeking preparation for careers in this field.

Non-immigrant International Students

Program Enrollment: F-1 and J-1 students are required to be enrolled full-time. The majority of their classes must be in-person and on campus. See the list of programs that satisfy these requirements, and contact the International Student and Scholars Office with questions.

Admission Procedures: See additional information regarding Graduate Admission policies and International Graduate Application online.

See **Exceptions to Policy in Graduate Admissions.

Degree Requirements

- Completion of any assigned preparatory courses. (Credit from preparatory courses do not count toward the M.S. degree.)
- Completion of 33 graduate units as follows:

Code	Title	Units
Required Courses		
	Students must complete the requirements for a graduate certificate in applied information technology. Currently, the following graduate certificates in information technology are available. Additional graduate certificates may be added to this list in the future.	15
Computer Forensics		
AIT 600	INFORMATION TECHNOLOGY INFRASTRUCTURE	
AIT 610	SYSTEMS DEVELOPMENT PROCESS	
AIT 650	COMPUTER & NETWORK FORENSICS AND INCIDENT RESPONSE	
AIT 660	MOBILE DEVICE FORENSICS	
AIT 745	CASE STUDIES IN COMPUTER FORENSICS	
Database Management Systems		
AIT 600	INFORMATION TECHNOLOGY INFRASTRUCTURE	
AIT 610	SYSTEMS DEVELOPMENT PROCESS	
AIT 632	DATABASE MANAGEMENT SYSTEMS	
AIT 732	ADVANCED DATABASE MANAGEMENT SYSTEMS	
AIT 735	CASE STUDIES IN DATABASE MANAGEMENT SYSTEMS	
Health Information Technology		
AIT 600	INFORMATION TECHNOLOGY INFRASTRUCTURE	
AIT 610	SYSTEMS DEVELOPMENT PROCESS	
AIT 644 or AIT 645	HEALTH INFORMATION TECHNOLOGY HEALTHCARE DATA ANALYTICS	
AIT 740	CASE STUDIES ON HEALTHCARE INFORMATION TECHNOLOGIES	
HCMN 535 or HLTH 633	HEALTH INFORMATION AND QUALITY MANAGEMENT ¹ HEALTH CARE SYSTEMS	
Information Security and Assurance		
AIT 600	INFORMATION TECHNOLOGY INFRASTRUCTURE	
AIT 610	SYSTEMS DEVELOPMENT PROCESS	
AIT 612	INFORMATION SYSTEMS VULNERABILITY AND RISK ANALYSIS	
AIT 614	NETWORK SECURITY	
AIT 710	CASE STUDIES IN INFORMATION SECURITY	
Information Systems Management		
AIT 600	INFORMATION TECHNOLOGY INFRASTRUCTURE	
AIT 610	SYSTEMS DEVELOPMENT PROCESS	
AIT 628	INFORMATION TECHNOLOGY AND BUSINESS STRATEGY	

AIT 630	INFORMATION TECHNOLOGY PROJECT MANAGEMENT
AIT 730	CASE STUDIES IN INFORMATION SYSTEMS
Internet Application Development	
AIT 600	INFORMATION TECHNOLOGY INFRASTRUCTURE
AIT 616	FUNDAMENTALS OF WEB TECHNOLOGIES AND DEVELOPMENT
AIT 610	SYSTEMS DEVELOPMENT PROCESS
AIT 618	CLIENT/SERVER-SIDE PROGRAMMING ON THE WEB
AIT 715	CASE STUDIES IN INTERNET APPLICATIONS
Networking Technologies	
AIT 600	INFORMATION TECHNOLOGY INFRASTRUCTURE
AIT 610	SYSTEMS DEVELOPMENT PROCESS
AIT 620	BUSINESS DATA COMMUNICATIONS
AIT 622	NETWORKS ARCHITECTURE AND PROTOCOLS
AIT 720	CASE STUDIES IN NETWORKING TECHNOLOGY
Software Engineering	
AIT 600	INFORMATION TECHNOLOGY INFRASTRUCTURE
AIT 624	SOFTWARE ENGINEERING FUNDAMENTALS
AIT 725	CASE STUDIES IN SOFTWARE ENGINEERING
Select at least two of the following courses:	
AIT 641	SOFTWARE REQUIREMENTS ENGINEERING
AIT 642	SOFTWARE TESTING AND MAINTENANCE
AIT 643	ENTERPRISE ARCHITECTURE
Electives	
Students must complete six graduate-level elective courses. A maximum of two elective courses may be in any of the following disciplines: accounting, computer science, human resource development, management, mathematics and technical writing. Those who want to take elective courses from a discipline other than AIT must get the AIT program director's approval before enrolling in the course. At least four of the elective courses must be graduate-level AIT courses from the following list:	18
AIT 612	INFORMATION SYSTEMS VULNERABILITY AND RISK ANALYSIS
AIT 613	INTRODUCTION TO SOFTWARE SECURITY
AIT 614	NETWORK SECURITY
AIT 616	FUNDAMENTALS OF WEB TECHNOLOGIES AND DEVELOPMENT
AIT 618	CLIENT/SERVER-SIDE PROGRAMMING ON THE WEB
AIT 620	BUSINESS DATA COMMUNICATIONS
AIT 622	NETWORKS ARCHITECTURE AND PROTOCOLS

AIT 624	SOFTWARE ENGINEERING FUNDAMENTALS
AIT 628	INFORMATION TECHNOLOGY AND BUSINESS STRATEGY
AIT 630	INFORMATION TECHNOLOGY PROJECT MANAGEMENT
AIT 632	DATABASE MANAGEMENT SYSTEMS
AIT 641	SOFTWARE REQUIREMENTS ENGINEERING
AIT 642	SOFTWARE TESTING AND MAINTENANCE
AIT 643	ENTERPRISE ARCHITECTURE
AIT 644	HEALTH INFORMATION TECHNOLOGY
AIT 645	HEALTHCARE DATA ANALYTICS
AIT 650	COMPUTER & NETWORK FORENSICS AND INCIDENT RESPONSE
AIT 652	ETHICS, LAW AND POLICY IN CYBERSPACE
AIT 655	MANAGING INFORMATION SECURITY
AIT 660	MOBILE DEVICE FORENSICS
AIT 670	SPECIAL TOPICS IN APPLIED INFORMATION TECHNOLOGY
AIT 695	INDEPENDENT STUDY IN APPLIED INFORMATION TECHNOLOGY
AIT 697	GRADUATE INTERNSHIP
AIT 732	ADVANCED DATABASE MANAGEMENT SYSTEMS

Total Units **33**

¹ The program recommendation is to take HLTH 633.

- a. Understand the information technology infrastructure and its place/value in today's business.
- b. Work effectively in teams and communicate effectively, both orally and in writing.
- c. Use their proficiency in at least one of the following IT-related concentrations to solve a variety of problems:
 - Computer Forensics
 - Database Management Systems
 - Health Information Technology
 - Information Security and Assurance
 - Information Systems Management
 - Internet Application Development
 - Networking Technologies
 - Software Engineering
- d. Prepare, present and develop proposals and solutions for today's governmental and industrial needs.