

## MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

### (MSIT)

#### WHY OUR PROGRAM?

The Master of Science in Information Technology (MSIT) program will prepare you to become an IT leader, equipped with the knowledge and skills needed to solve a variety of complex computing problems. You'll gain expertise in cutting-edge tools and techniques that can serve the needs of practitioners tasked with the development, implementation, operation and management of sophisticated computing environments.

#### AREAS OF STUDY

You may also specialize in one of the following areas of study:

- ▶ Cybersecurity – Critical Infrastructure
- ▶ Data Management and Analytics
- ▶ Health Information Technology
- ▶ Information Assurance
- ▶ Network Management
- ▶ Software Engineering

[WWW.TESU.EDU/MSIT](http://WWW.TESU.EDU/MSIT)

#### KEEP PACE WITH ADVANCING TECHNOLOGY

Technology is interwoven into every industry and continues to transform businesses around the globe. The Master of Science in Information Technology (MSIT) is an online graduate program that prepares you with the expertise and knowledge required for leadership roles in information technology (IT). You'll gain a solid foundation in IT and develop specialized, marketable skills that are most relevant to your career and professional interest.

#### PROGRAM ADVANTAGES

- ▶ The 36-39-credit program can be completed in less than two years on a part-time basis
- ▶ Courses are mentored by field practitioners to give you access to the most current, industry-relevant information
- ▶ Nuclear Regulatory Commission (NRC) Scholarship eligible program; scholarships averaging \$2,500 to qualified students based on need and academic performance. The maximum scholarship award is \$10,000.



"The MSIT degree helped validate my skills and bring them together into a professional credential. I was also able to delve deeper into research about current cybersecurity threats that I might not have been exposed to in my day-to-day work. My courses also gave me a 'situational awareness' about what to look out for and threats to pursue."

Gina Pierson, BSAST '16, MSIT '19

## CAREER INSIGHTS

Individuals with graduate degrees earn an average of \$1 million more in lifetime income compared to high school graduates.\*



Within a 100 mile radius of TESU:\*\*

- |  |  |
|--|--|
| ▶ <b>10% job growth (2020-2025)</b>    | ▶ Top Occupations:                             |
| ▶ <b>73,815 known positions</b>        | ▶ Software Developer, Applications and Systems |
| ▶ <b>6,648 annual openings</b>         | ▶ Computer Systems Analyst                     |
| ▶ <b>Median earnings ≈ \$114.9K/yr</b> | ▶ Computer and Information Systems Manager     |
|  | ▶ IT Project Manager                           |

\*<https://www.ssa.gov/policy/docs/research-summaries/education-earnings.html>

\*\*Emsi Q2 2020 Data Set

## WHY CHOOSE TESU?

As one of the first schools in the country designed specifically for busy, motivated adults, Thomas Edison State University is dedicated to providing you with a high-quality education — anytime, anywhere.

- ▶ **Exceptional Value:** Competitive tuition and fees. Plus, financial aid and scholarships are available.
- ▶ **Barrier Free:** Students who receive an undergraduate degree with a GPA of 3.0 or higher will be automatically admitted to a graduate program.\* No GRE/GMAT or recommendation letter required.
- ▶ **Degree Flexibility:** Engage in your courses whatever time of day works for you. Courses are available 24/7.

\*Several programs have additional requirements beyond GPA for admission.

## ONLINE. ACCREDITED. RESPECTED.

Three words that characterize Thomas Edison State University's (TESU) unique approach to providing quality higher education in today's technology-fueled times.

Dedicated to educating adult learners for five decades, TESU has set the standard in online learning. As the leader in online education and a national leader in the assessment of adult learning, TESU is accredited by the Middle States Commission on Higher Education and has been called "the college that paved the way for flexibility" by *The New York Times*.

Our innovative online and independent study courses and credit-by-exam programs give you the flexibility to pursue your degree when and where it is convenient for you. With more than 100 areas of study, TESU offers associate, bachelor's, master's and doctoral degrees and undergraduate and graduate certificates. One of New Jersey's senior public institutions, TESU's liberal credit transfer policies and tuition models remove barriers for adults pursuing higher education. Our resume-relevant programs provide career-building skills to help you meet your educational and professional goals.

**YOU'RE READY TO STUDY WITH THE LEADER IN ONLINE EDUCATION. EARN YOUR DEGREE ON YOUR SCHEDULE. VISIT TESU.EDU AND APPLY TODAY.**

THOMAS EDISON  
STATE UNIVERSITY

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Courses and Credit Allocation

## MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

Credits

### MSIT CORE COURSES 15-18

MSI-501	Foundations of Information Technology*	3
MSI-502	Telecommunications and Networking	3
MSI-503	Object-Oriented Application Development	3
MSI-504	Information Systems Analysis, Modeling, and Design	3
MSI-505	Principles of Database Design	3
MSI-510	Project Management for Technology	3

### AREAS OF STUDY

#### CYBERSECURITY —

#### CRITICAL INFRASTRUCTURE 15

CYB-521	Foundation of Utility Cybersecurity	3
CYB-522	Cybersecurity Risk Management in Utility Environments	3
CYB-523	Protective Security Controls in Utility Systems and Networks	3
CYB-524	Monitoring, Detection, Response, and Recovery in Utility Environments	3
CYB-525	Integrating Cybersecurity into the System Lifecycle	3

#### DATA MANAGEMENT AND ANALYTICS 15

DTM-531	Advanced Database Systems	3
DTM-532	Data Warehouse Design	3
DTM-533	Data Analytics	3
DTM-534	Information Retrieval	3
DTM-535	Data Mining and Knowledge Management	3

#### HEALTH INFORMATION TECHNOLOGY 15

HIT-541	Foundations in Health Informatics	3
HIT-542	Clinical Informatics	3
HIT-543	Electronic Health Records Management	3
HIT-544	Telehealth Systems	3
HIT-545	Legal, Ethical, and Social Issues in Health Informatics	3

#### INFORMATION ASSURANCE 15

IAS-551	Foundations of Information Assurance	3
IAS-552	Vulnerabilities, Threats, and Attacks	3
IAS-553	Countermeasures Design and Implementation	3
IAS-554	Policies and Procedures Development and Implementation	3
IAS-555	Computer Forensics and Information Systems Auditing	3

#### NETWORK MANAGEMENT 15

NET-561	Designing Large-Scale Routing, Switching, and Broadband Systems	3
NET-562	Wireless and Mobile Networks	3
NET-563	Pervasive and Cloud Computing	3
NET-564	Large-Scale Network Operations, Administration, and Maintenance	3
NET-565	Network Security	3

#### SOFTWARE ENGINEERING 15

SWT-571	Software Design and Architecture	3
SWT-572	Software Modeling and Analysis	3
SWT-573	Secure Software Design and Development	3
SWT-574	Software Product Development and Quality Management	3
SWT-575	Software Systems Integration	3

#### MASTER'S PROJECT 6

#### TOTAL 36-39

\*This course is required for learners who need a refresher or who lack the prerequisite knowledge in IT as determined during the application evaluation period.