

Computer Science

MASTER OF SCIENCE IN

From aerospace to artificial intelligence, computers affect almost every aspect of modern-day life. As technology continues to advance, so does the demand for computer scientists. Today, more than ever, business and industry leaders rely on those with specialized skills to design, implement, and apply the latest technologies needed to thrive in an increasingly competitive and global economy. And this trend is expected to grow – computer scientists and database administrators are projected to be among the fastest-growing occupations over the next several years.



Lawrence Technological University's Master of Science in Computer Science can prepare you to meet the challenges of this exciting and evolving industry. The program offers the flexibility to accommodate students from a variety of backgrounds – recent college graduates in computer science who wish to gain advanced knowledge and skills in applied computing, working professionals seeking to further their technical competencies, and even those with undergraduate degrees in non-computer areas interested in entering the field.

Why Computer Science at Lawrence Tech?

The Master of Science in Computer Science at Lawrence Tech differs from traditional graduate programs in computer science. In keeping with the University's motto of theory and practice, the program

emphasizes applied concepts and reinforces their applications in the laboratory. Drawing upon examples from business and industry, finance, and scientific research, the program can help you develop a thorough understanding of both the theoretical concepts and practical uses of computer science.

Lawrence Tech's MS in Computer Science requires 30 credit hours and can be tailored to fit your individual needs. Depending on your interests, you will choose two concentrations from among several computer science disciplines, each consisting of a two-course sequence, plus two collaborative research projects and four electives.

Concentrations include:

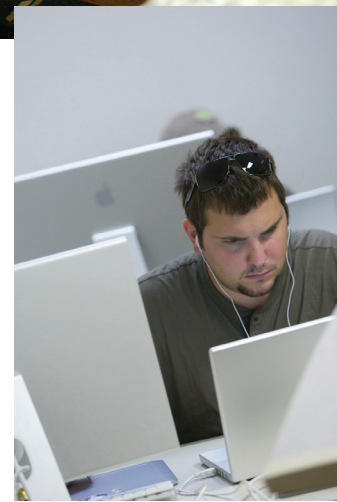
- **Bioinformatics** – Combine principles in mathematics, statistics, and computer science in order to analyze biological, biochemical, and biophysical data.

CURRICULUM

Your 30-credit-hour program consists of:

Core Courses	18
Four courses selected from two areas of concentration	
Collaborative Research Project 1 and 2	
Electives	12
Total Credit Hours	30

- **Computer Graphics** – Explore the theory and application of representing, displaying, and designing virtual objects and environments.
- **Computer Security** – Study network security and infrastructure, cryptography, intrusion detection and control, user authentication, data integrity, and disaster recovery.
- **Database Systems** – Gain advanced training and experience by working with distributed database systems and client/server models.
- **Distributed Systems** – Analyze the theoretical foundations of distributed computing and practical implementations of LANS, WANS, Internets, and intranets.
- **Intelligent Systems (Autonomous Robotics)** – Learn about developing computational systems that exhibit abilities to recognize sensory inputs, adapt by learning, and facilitate appropriate actions (intelligent behavior) in complex and changing environments.
- **Programming Languages** – Discover how communication between human and machine is accomplished.
- **Software Engineering** – Examine the development of the methodology behind programming and testing in large programming environments.



Getting Started

Admission to the Master of Science in Computer Science program requires:

- A bachelor’s degree that includes one year of mathematics and one year of science.
- An overall undergraduate GPA of at least 3.0.
- Completion of the following undergraduate courses or their equivalencies:
 - Computer Architecture and Assembly Programming
 - Data Structures
 - Discrete Mathematics
 - Introduction to Theory of Computation
 - Operating Systems

For more information, contact Lawrence Tech’s Office of Admissions at 800.CALL.LTU or admissions@ltu.edu. For specific questions about the Master of Science in Computer Science, visit ltu.edu/arts_sciences/computer_science/masters.asp or contact the Department of Mathematics and Computer Science at 248.204.3560 or mcschair@ltu.edu.

GET MORE. DO MORE.

Lawrence Technological University produces leaders with an entrepreneurial spirit and a global view. That’s why Lawrence Tech graduates are known for top job placement and higher starting salaries. Your benefits:

- Intensive leadership-driven programs that embrace theory and practice
- Faculty with current industry experience
- Convenient schedules that include day, evening, weekend, and online classes
- Well-connected career placement services
- A high-tech, wireless 102-acre campus that’s commuter friendly, with recreation, housing, and meal service options

Explore nearly 100 undergraduate, master’s, and doctoral programs in Colleges of Architecture and Design, Arts and Sciences, Engineering, and Management.