

TALWAR COLLEGE OF ENGINEERING AND COMPUTER SCIENCES

PROGRAM LEAD

Ihab Mohammed

Professor Mohammed arrived at Indiana Tech in 2021. He has taught computer science courses for more than 10 years. He earned his Ph.D. in Computer Science from Western Michigan University in 2020. While at WMU, Dr. Mohammed earned the Computer Science Department's Outstanding Doctoral Graduate Student Award (2017) and its Graduate Research Publication Award (2018). He also has a patent and many published papers in prestigious journals and at conferences. As an instructor at WMU, he earned its Graduate Teaching Effectiveness Award (2019). Dr. Mohammed's research interests span the areas of vehicular networks (VANETS), online algorithms, optimization problems, machine learning, IoT and federated learning.

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Computer Science, B.S.

ind.tc/child-development-bs

This degree program will expose you to a broad background in the field of computer science, with extensive work in program development, data structures and algorithms, operating systems, computer system architecture, network architecture, theory of computation, software engineering and programming language design.

You will focus on designing algorithms that will help you solve problems and gain a better understanding about how computers work. With this insight, you will develop efficient software using top programming languages. The degree will prepare you to design and create software to meet various needs.

Why Choose Indiana Tech?

- The Bachelor of Science program in Computer Science is accredited by the Computing Accreditation Commission of ABET, under the General Criteria and the Computer Science and Similarly Named Computing Programs Program Criteria.
- You will take on software projects of increasing sophistication as you progress through your coursework.
- An abundance of opportunities to explore and learn outside the classroom will be available to you, including participation with the Cyber Warriors, Indiana Tech's cybersecurity team; the Math Club; or our chapters of the Association for Computing Machinery (ACM) or the Institute of Electrical and Electronics Engineers (IEEE).
- Indiana Tech fosters an active learning environment, enriched by instructors who possess years of experience in their respective fields.

Career-Focused Coursework

Every Indiana Tech program is designed to provide the students all the skills and knowledge required to be successful in their field. Degree programs also include a capstone project that allows each student to work on a real-world challenge and develop a solution that can serve as the centerpiece of a professional portfolio. Below, you can explore career fields, salary information and employer demand from our partners at Lightcast, the leading labor market and career data provider in the U.S.

Curriculum

Required Core Courses

- CS 1200 - Introduction to Computer Science
- CS 1300 - Computer Science I
- CS 1350 - Computer Science II
- CS 1500 - Introduction to Server Systems
- CS 2100 - Introduction to Computer Systems
- CS 2500 - Database Systems
- CS 3200 - Operating Systems
- CS 3500 - Numerical Methods
- CS 3700 - Object Orientation
- CS 3800 - Data Structures & Algorithms
- CS 4000 - Computer Science Seminar
- CS 4500 - Software Engineering
- CS 4600 - Organization of Programming
- CS 4800 - Systems Software
- IIT 1000 - University Experience
- MA 1200 - Calculus I
- MA 1210 - Calculus II
- MA 2150 - Linear Algebra
- MA 2300 - Differential Equations
- MA 2410 - Discrete Structures
- MA 2430 - Probability & Statistics for Engineers
- MA 3200 - Graph Theory
- NET 1200 - Network Design I
- NET 1250 - Network Design II
- PH 1300 - General Physics I
- PH 1310 - General Physics I Laboratory
- PH 2300 - General Physics II
- PH 2310 - General Physics II Laboratory

Warriors in the Workplace

Indiana Tech graduates with this degree have earned jobs at:

- Aptera
- Idemia
- Emerson Commercial and Residential Solutions
- Do it Best Corp.
- Core BTS

Internship Opportunities

Internship opportunities Indiana Tech students pursuing this degree have interned with:

- American Electric Power
- B.F. Goodrich
- Vera Bradley
- DTE Energy
- Ottenweller Contracting
- Emerson Commercial
- Steel Dynamics

Hannah Wendel

B.S. Computer Science, 2018

When Hannah graduated in 2018 with a bachelor's degree in computer science, she already had a world of experience to give her a step up into the workforce. Hannah, a software developer at Fort Wayne's Aptera, Inc., had a professor who nudged her toward an internship he felt would be a perfect fit for her.

"I ended up getting the internship and the real world experience is really what set me up for success," Hannah said. "A lot of companies require some kind of experience and having internships provide that... I learned a lot from both of my internships that I would not have learned from any college."

During her first internship, she found herself working for the City of Butler, Indiana, as a GIS (Geographic Information Systems) technician. There, she had the unique opportunity to build a map of a cemetery through digital software—something which had never been done before. Afterward, she presented in Indianapolis at the Indiana GIS conference to discuss her project.