

Program Information

Software Developer

2024/2025

Program Overview	The Software Developer graduate acquires the basic knowledge, skills, and abilities to qualify for career opportunities as a Junior Full-Stack Software Developer. Students complete practical, hands-on projects that emphasize quantitative reasoning, analysis and problem solving, technical writing and communications, and disciplined development of modern front-end and back-end software systems. Students should expect to work collaboratively on project-based assignments. The program includes an eight-week work practicum and participation in MITT's Bridging to Work workshops which provides students a solid foundation in the employability and essential skills employers demand. Graduates are provided access to the GitHub platform where they can further develop their professional presence.
Area of Study	Information and Communication Technologies
Credential	Diploma
Program Length	1 Year Full time (12 months)
Delivery	Hybrid (online and in-classroom)
Work-Integrated Learning	8-week practicum

Open to International Students	Yes
CIP Code	11.0201

Career Outcomes

- Full-Stack Developer
- Back-End Developer
- Front-End Developer
- Software Developer
- Web Developer
- Web Designer
- UI/UX Designer
- Software Engineer
- Software Architect
- DevOps Engineer
- Data Analyst
- Mobile Developer

All Courses

Course Name	Description	Hours
Introduction to Web Development (SD-100)	This course introduces students to fundamental web development concepts through hands-on projects. Students will build responsive websites and create a portfolio to showcase their work, developing essential coding skills for the program.	66 hours
JavaScript Basics (SD-110)	Students develop foundational JavaScript skills by solving programming problems and building interactive web applications.	76 hours

	Projects include creating a digital version of Tic-Tac-Toe and the classic game 'Concentration.'	
Object-Oriented JavaScript (SD-120)	Building on JavaScript fundamentals, students explore object-oriented programming concepts, prototypes, and ES6 features. They apply these skills to develop an interactive arcade-style game and a budgeting app.	72 hours
Tools and Automation (SD-130)	Students learn to navigate the command line and use Git for source control. They also automate tasks by creating scripts and tools to improve development workflows.	44 hours
Unit Testing in .NET (SD-125)	This course introduces students to unit testing principles in C#. They will explore testing frameworks and tools, learning best practices for writing and managing tests to ensure software quality.	42 hours
Introduction to Third-Party APIs (SD-105)	Students develop applications that integrate with external APIs, working with geolocation and transit data, as well as entertainment databases, to create dynamic and interactive web applications.	35 hours
Technical Writing Skills (SD-160)	Students develop writing skills essential for IT professionals, including technical documentation, workplace communication, and online collaboration tools used in the software industry.	42 hours
Communication and Presentation Skills (SD-170)	This course strengthens students' verbal communication, teamwork, and public speaking skills. Emphasis is placed on clear and professional interactions,	60 hours

	cultural communication differences, and effective presentations.	
Introduction to LINQ and ASP.NET MVC (SD-115)	Students explore the Model-View-Controller (MVC) pattern and Language Integrated Query (LINQ) to build structured web applications with C#.	33 hours
Object-Oriented Programming Fundamentals (SD-300)	Students learn core object-oriented programming concepts in C#, including inheritance, polymorphism, encapsulation, and abstraction, to design maintainable and scalable software.	40 hours
Relational Database Design (SD-310)	This course introduces students to database design and management, covering normalization, indexing, schema design, and entity-relationship modeling to ensure efficient data storage and retrieval.	50 hours
Advanced Database and ORM Concepts (SD-330)	Students gain practical experience with advanced database interactions and Object-Relational Mapping (ORM) techniques, integrating databases seamlessly into applications.	100 hours
Advanced Topics in C# (SD-340)	This course explores advanced C# programming concepts, including asynchronous programming, multithreading, and performance optimization.	68 hours
Algorithms and Data Structures (SD-290)	Students analyze and implement algorithms and data structures in C#, focusing on efficiency, problem-solving, and performance optimization in software applications.	55 hours



Introduction to Number Systems and Desktop Applications (SD-320)	Students explore number systems like binary and hexadecimal while learning the fundamentals of developing desktop applications in C#.	55 hours
Software Engineering and Design Patterns (SD-350)	This course introduces students to widely used design patterns in .NET, teaching them how to build scalable and maintainable applications.	50 hours
Personal Brand and Career Management (SD-255)	Students develop strategies for career readiness, focusing on professional branding, networking, and transitioning into the tech industry.	20 hours
Introduction to React (SD-260)	Students learn React.js fundamentals, building dynamic, stateful web applications using modern front-end development techniques.	55 hours
Software Developer Internship (SD-270)	Eligible students gain hands-on industry experience in a real-world software development setting, applying their skills, learning workplace procedures, and building professional connections.	245 hours