

Prepare students with technology skills for the global economy.

Provide your students with hands-on experience creating new software and applications, and develop the critical-thinking and computational skills for life and careers in the digital world.

Society runs on technology. Whatever field students pursue for work or school, success increasingly depends on knowing how technology works. In fact, jobs requiring computer science skills outnumber trained graduates by 3-to-1, yet 90% of schools don't teach it. Reverse the trend and prepare your students for success with the Microsoft Imagine Academy Computer Science curriculum.

Bring Computer Science into any classroom

The Microsoft Imagine Academy Computer Science curriculum provides engaging and flexible learning tools that guide any student from foundational computer science concepts to advanced programming techniques.

The program includes instructor-led lessons, independent online learning, programming environments, and certification preparation—all the tools to pique students' interest in computer science; instill fundamental programming concepts; and expand course offerings into specialized study topics, including software development, web development, gaming, and more.

Students with a strong aptitude in Computer Science can demonstrate college and career readiness by earning Microsoft Technology Associate (MTA) and Microsoft Certified Solutions Developer (MCSD) Certifications.

Why K-12 Computer Science?

"More than 50% of today's jobs require some degree of technology skills, and experts say that percentage will **increase to 77% in the next decade.**"

-US Bureau of Labor Statistics

Computer science is a top paying college degree and computer programming jobs are growing at **2x the national average.**

-Bureau of Labor Statistics, National Science Foundation, Bay Area Council Economic Institute.

Computing jobs comprise **73% of annual new U.S. STEM jobs** through 2020.

-US-BLS Employment Projections, 2010-2020

The Computer Science area of study helps students learn essential skills for college and careers:

- Problem Solving
- Critical Thinking
- Data Analysis
- Computational Thinking

Institutions get:

- Real-world relevant curriculum to enhance STEM programs
- A proven method to bridge academic and real-world skills
- Tools to improve student engagement and success

Students get:

- An engaging way to learn core technology concepts
- A head start on college and workforce readiness
- Valuable credentials for college and career recruiters

Educators get:

- Relevant curriculum designed by technology education experts
- A variety of teaching resources, software, and assessments tailored for experience levels
- Classroom-proven methods to engage and inspire students

For more information, go to www.microsoft.com/ImagineAcademy

Access immersive learning tools to teach essential future-ready skills

Microsoft Imagine Academy now includes Computer Science curriculum! Offerings range from one hour building blocks to semester and year-long courses.

Interactive learning experiences for beginners (ages 10-16)

- The **Learn to Code** series features courses varying in length from one to eight hours and consists of engaging, light content that interweaves instructional video and hands-on guided practice writing code. Coding courses can be found on the Imagine Academy Online learning (see steps above) and also on the Microsoft Virtual Academy at: <https://mva.microsoft.com>.
 - **Hour of Code with Minecraft and TouchDevelop.** A one-hour independent study course that interweaves instructional video with hands-on, guided practice in writing code, tasking students to fix a broken mobile computer game. No experience required!
 - **"Dream it. Make it."** Classroom Extension for Hour of Code with TouchDevelop. A 5-hour instructor-led course that transforms the classroom into a game development start-up. Students create a game by customizing features based on "customer" feedback from other students, then publish a fully playable game.
- **CODExist: The Birth of a Bot.** An 8-hour modular video-on-demand course that walks students through building a mobile game from scratch using TouchDevelop, expanding programming concepts with assignments suitable for homework or flipped classroom environments.
- **Creative Coding through Games and Apps (CCGA)** is a semester-long introduction to programming course (designed for ages 13-16) that maps to CSTA standards. Students gain hands-on experience designing, programming and publishing mobile games and apps. Course includes full course materials. Click here for a brief CCGA Overview at: <http://aka.ms/creativecodingeval>.

Immersive hands-on learning for advancing students

- **CS50 AP** is a Harvard-inspired, challenging journey that prepares students for the AP CS Principles exam. Content covers programming as well as real-world problem solving and algorithm building. The units are released on a rolling basis and are available through the CS50 AP Wiki at: <http://cs50.wiki/This+is+CS50+AP>.
- **Introduction to Programming with Python.** An independent study course providing a fast-paced and comprehensive introduction to programming for students (ages 15-18) naturally curious about programming. Students learn universally-applicable fundamentals using Python as a programming language and Visual Studio as an integrated development environment (IDE).
- **Java Programming Fundamentals.** A series of 12 independent, online activities for high school students that can be used to introduce or review Java programming topics. Students complete Office Mix lessons and Code Hunt interactive challenges solved by writing Java code.

Specialized skill validation

Microsoft Official Academic Courses (MOAC) provide eBooks, lab manuals, and instructor resources to plan, prepare, and teach courses for Microsoft Technology Associate (MTA) certification preparation.

Taught over 6-to-16 weeks, the MTA Development Track covers *Software Development Fundamentals* (98-361) and *HTML5 Application Fundamentals* (98-375).

Microsoft technical certifications for college and career-bound students

Students with a strong aptitude in Computer Science can demonstrate college and career readiness by earning Microsoft Technology Associate (MTA) and Microsoft Certified Solutions Developer (MCS D) Certifications. Taking one of the exams below earns MTA certification on the Development Track.

MTA
Development
Track

98-361: Software
Development Fundamentals

98-375: HTML Application
Development Fundamentals

Pass any one
exam to earn:

Microsoft
Technology Associate

Entry to Advanced
Certifications

Microsoft
CERTIFIED
Solutions Developer

For more information, go to www.microsoft.com/ImagineAcademy