



Career-related
Programme

IBCP: Computer Science

Rockville High School

This program does meet Maryland State Career and Technology Education Requirements as a program completer as well as the IB Career-related Programme Requirements.



Overview: Students explore programming, software development, data analysis, and computational thinking through a nationally recognized, hands-on curricula. The program builds a strong foundation for success in university computer science, technology, and STEM programs.

Code. Create. Innovate. Your computer science journey starts here:

- **Learn by Doing** – Build apps, design programs, and take on real-world computing challenges.
- **Team Up for Success** – Build communication, collaboration, and problem-solving skills.
- **Think Like a Computer Scientist** – Develop critical thinking, research skills, and the ability to tackle complex problems independently and collaboratively.
- **Explore Technology in Action** – Complete independent research projects that have earned national recognition and participate in real-world tech experiences.
- **Show What You Know** – Graduate with projects and skills that demonstrate your readiness for college, careers, and the ever-evolving world of technology.

This program is taught by Certified Teachers using the Code.org, CMU CS Academy, College Board and IB Curriculums.

College credit for AP coursework at MCPS is supported by College Board. More information can be found here:

<https://apstudents.collegeboard.org/getting-credit-placement>



Computer Science Course Sequence

Freshman	AP Computer Science Principles
Sophomore	Honors Computer Programming 1
Junior	AP Computer Science A (JAVA)
Senior	IB Computer Science

Why choose Rockville High School? At Rockville High School, an International Baccalaureate (IB) World School, students push their limits with challenging academics, a welcoming and inclusive community, and endless opportunities to get involved.

- Located in Rockville, MD—home to leading biomedical and tech companies—RHS puts students at the heart of innovation.
- Ranked among the **top 25 schools sending graduates to the University of Maryland's A. James Clark School of Engineering**.
- Proud to be a **PLTW Distinguished High School**, recognized for outstanding Engineering and Biomedical Science programs.



Rockville High School gives students the skills, experiences, and confidence to succeed in college, careers, and beyond.

Additional IBCP Program Requirements:

- Students will complete the IBCP Core Components:
 - Personal and Professional Skills (critical thinking course)
 - The Reflective Project (a research-based essay on a career-based ethical issue)
 - Language and Cultural Studies
 - Community Engagement
- Students must also complete at least two IB courses
 - English Language and Literature
 - Spanish Language and Literature
 - French
 - Spanish
 - Environmental Systems and Society
 - Social Cultural Anthropology
 - Psychology
 - Biology
 - Chemistry
 - Computer Science
 - Physics
 - Math Analysis and Approaches
 - Math Applications and Interpretations
 - Visual Art

Sample IBCP Student Schedule

	11th Grade	12th Grade
Period One	IB Language and Literature	IB Language and Literature
Period Two	AP Computer Science A (JAVA)	IB Computer Science
Period Three	IB Personal and Professional Skills	IB Personal and Professional Skills
Period Four	Math	Math
LUNCH		
Period Six	Honor Physics	IB ESS
Period Seven	AP Precalculus	AP Calculus AB
Period Eight	AP World History	IB Psychology

Prepare for College & Careers in STEM: Computer Science at Rockville High School empowers students to become creators of technology through hands-on projects, app development, and real-world computing experiences that build skills for top universities and future careers. Launch your future in computer science and innovation!

Computer Science Careers

- Software Development | Data Science | Cybersecurity | Artificial Intelligence | Game Design

Related Careers

- Manufacturing | Robotics | Research | Computer Engineering | Information Technology

Skills for Any Career: Even if you don't end up choosing a career in Computer Science, this program gives you a competitive edge. Hands-on projects build problem-solving, collaboration, and design skills that employers value across every industry.

Questions? Please contact us!

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