

Industry Credentials, Concentration Sequences, and Career Clusters

Programming, Advanced (6641)

Industry Credentials:

These apply only to 36-week courses

- Advanced Placement (AP) Computer Science Principles Examination
- App Development with Swift Examinations
- Certified Associate in Python Programming (PCAP) Examination
- Certified Entry-Level Python Programmer (PCEP) Examination
- Certified Internet Web (CIW) Advanced HTML 5 and CSS3 Specialist Examination
- Certified Internet Web (CIW) Data Analyst Examination
- Certified Internet Web (CIW) Database Design Specialist Examination
- Certified Internet Web (CIW) Internet Business Associate Examination
- Certified Internet Web (CIW) JavaScript Specialist Examination
- Certified Internet Web (CIW) Network Technology Associate Examination
- Certified Internet Web (CIW) Site Development Associate Examination
- Certified Internet Web (CIW) Social Media Strategist Examination
- Certified Internet Web (CIW) User Interface Designer Examination
- Certified Internet Web (CIW) Web Security Specialist Examination
- CLA-C Programming Language Certified Associate Certification Examination
- CLE-C Certified Entry-Level Programmer Certification Examination
- Cloud Essentials+ Certification Examination
- CodeHS Level 1 Certification Examinations: Java Level 1
- CodeHS Level 1 Certification Examinations: JavaScript Level 1
- CodeHS Level 1 Certification Examinations: Python Level 1
- Coding in Minecraft Capstone Credential Examination
- College and Work Readiness Assessment (CWRA+)
- College Level Examination Program (CLEP): Information Systems and Computer Applications
- Computer Programming Assessment
- CPA-C++ Certified Associate Programmer Certification
- CPE-C++ Certified Entry-Level Programmer (CPE) Examination
- IC3 Digital Literacy Certification Examinations

- Information Technology Specialist Certification Examinations: HTML and CSS
- Information Technology Specialist Certification Examinations: HTML5 Application Development
- Information Technology Specialist Certification Examinations: Java
- Information Technology Specialist Certification Examinations: JavaScript
- Information Technology Specialist Certification Examinations: Python
- Information Technology Specialist Certification Examinations: Software Development
- JSA-Certified Associate JavaScript Programmer
- JSE-Certified Entry-Level JavaScript Programmer
- National Career Readiness Certificate Assessment
- Oracle Certified Foundations Associate Examinations: Oracle Java Foundations
- Unity Certified User Examinations: Programmer Certification
- Workplace Readiness Skills for the Commonwealth Examination

Concentration Sequences:

*A combination of this course and those below, equivalent to two 36-week courses, is a **concentration sequence**. A **program completer** is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program. Students wishing to complete a specialization may take additional courses based on their career pathways.*

- AP Computer Science
- AP Computer Science Principles
- Computer Information Systems (18 Weeks)
- Computer Information Systems (36 Weeks)
- Computer Information Systems, Advanced (18 Weeks)
- Computer Information Systems, Advanced (36 Weeks)
- Computer Network Software Operations
- Computer Network Software Operations, Advanced
- Cybersecurity Operations
- Database Design and Management (Oracle)
- Design, Multimedia, and Web Technologies (18 Weeks)
- Design, Multimedia, and Web Technologies (36 Weeks)
- Design, Multimedia, and Web Technologies, Advanced (18 Weeks)
- Design, Multimedia, and Web Technologies, Advanced (36 Weeks)
- Digital Applications (18 Weeks)
- Digital Applications (36 Weeks)
- Information Technology Fundamentals
- International Baccalaureate Information Technology in a Global Society

- Java Programming (Oracle)
- Modeling and Simulation Technology
- Office Administration (18 Weeks)
- Office Administration (36 Weeks)
- Programming

Career Clusters, Career Pathways, and Occupations:

- Arts, A/V Technology and Communications
 - Telecommunications
 - Computer Programmer
 - Network Systems and Data Communication Analyst
- Information Technology
 - Network Systems
 - Computer Security Specialist
 - Computer Software Engineer
 - Database Analyst
 - Network Architect
 - Systems Analyst
 - Programming and Software Development
 - Applications Integrator
 - Computer Software Engineer
 - Game Designer, Programmer
 - Multimedia Artist, Animator
 - Network Systems and Data Communication Analyst
 - Programmer
 - Project Manager
 - Software Applications Engineer
 - Software Test Engineer
 - Systems Analyst
 - Web Developer
 - Web and Digital Communications
 - Applications Integrator
 - Graphic Designer
 - Multimedia Artist, Animator
 - Project Manager
 - Systems Analyst
- Science, Technology, Engineering and Mathematics

- Engineering and Technology
 - Computer Hardware Engineer
 - Computer Programmer
 - Computer Software Engineer
 - Mechanical Engineering Technician
 - Network Systems and Data Communication Analyst
 - Network and Computer Systems Administrator
 - Systems Analyst
 - Technical Writer
 - Telecommunications Specialist
- Science and Mathematics
 - Bioinformatics Technician
 - Secondary School Teacher
 - Technical Writer