



COMPUTER SCIENCE PATHWAY

Why choose a career in Computer Science?

According to IT Business Edge Magazine, the most in-demand information technology job titles are: *

	ANNUAL EARNINGS
Software Engineer	\$93,000
Systems Engineering	\$91,000
Software Developer	\$89,000
Java Developer	\$98,000
Business Analyst	\$84,000
.NET Developer	\$91,000
Web Developer	\$82,000
Systems Administrator	\$77,000
Project Manager	\$93,000
Network Engineer	\$91,000

* <http://www.itbusinessedge.com/slideshows/top-10-most-in-demand-it-job-titles.html>



These courses are available to juniors and seniors only

Through a partnership with Great Bay Community College and Portsmouth Career Technical Center, we are offering 4 Computer Science courses.

Earn 3 college credits for each course!

- CIS112-Object Oriented Programming
- CIS124-Web Development I
- CIS177-Intro to Python
- CIS148-Intro to Java (prerequisite Object Oriented Programming)

Next steps: See your Guidance Counselor to schedule or see CTE Director Ms. Canada for information!

Course Descriptions

All courses taught at Portsmouth High School

CIS110 - Intro to Computer Science

Are you interested in creating computer programs? Join this class to learn the fundamentals of using the Python language to create applications, games and robotics programs. Learn the basic skills of computer programming which can lead to exciting careers in this creative and fast growing career field.

CIS112 - Object Oriented Programming

Learn to program for modern systems and computing environments using visual and interactive tools such as Greenfoot, MIT App Inventor and Android Studio. Emphasis throughout the course is to make the work of programming interesting, enjoyable and relevant to modern software design, development and implementation. Students focus on real programming tasks (mainly in Java) while learning the relevant theory and concepts along the way. Skills acquired in the course will prepare students for further study in software development or in areas of technology where programming logic is needed such as robotics, hardware system design and networking. If you have dabbled with coding for fun, then this course is definitely for you.

CIS124 - Web Development 1

In this course, students will gain knowledge of the web site development process and learn how to develop web applications that meet the current W3C standards. Students will study in detail HTML syntax and will develop well-formed and valid web documents. Students will also learn how to manage web presentation, layout and design using CSS. Basic JavaScript and jQuery will round out the technologies, allowing students to create modern web applications.

CIS177 - Intro to Python

Prerequisite: Introduction to Object Oriented Programming

This course will provide a gentle, yet intense, introduction to programming using Python for highly motivated students with little or no prior experience in programming. The course will focus on planning and organizing programs, as well as the grammar of the Python programming language. The course will also cover topics in object oriented programming graphical user interfaces, data structures and basic algorithm analysis.

CIS148 - Intro to Java

Prerequisite: Introduction to Object Oriented Programming

The purpose of this course is to provide a solid foundation in the Java programming language. Program planning, object oriented design/development/implementation, and Java language syntax will be emphasized. This course will prepare students for advanced study of the Java programming language as well as introduce students in other fields of computer study to general object programming. Students will become familiar with modern development environments such as Eclipse, IntelliJ and Android Studio. Students focus on real programming tasks while learning the relevant theory and concepts along the way. The course will culminate with a final project of either an Android app or other Java application based on individual student interest.