

## **Course of Study Computer Science**

### **Computer Science Track**

#### ***Freshman – Computer Science***

IT Fundamentals	10 credits
Introduction to Cyber Security (Semester 1)	2.5 credits
Microsoft Office & Digital Literacy	2.5 credits
CP or Honors English I	5 credits
CP or Honors US History I	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Biology	5 credits
CP or Honors Spanish I or Italian I	5 credits
Fitness for Life I	5 credits

#### ***Sophomore – Computer Science***

IT Essentials	10 credits
Fundamentals of Programming	5 credits
CP or Honors English II	5 credits
CP or Honors US History II	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Chemistry	5 credits
CP or Honors Spanish II or Italian II	5 credits
Fitness for Life II	5 credits

#### ***Junior – Computer Science***

Networking Essentials	15 credits
CP or Honors English III	5 credits
CP, Honors or College Level World History	5 credits
CP or Honors Level Mathematics	5 credits
CP or Honors Lab Science	5 credits
Fitness for Life III or Fitness for Life III – Indep/Sports	5 credits
Financial Literacy or Performing Arts or World Lang III	5 credits

#### ***Senior – Computer Science***

College Level Phys Fitness/Contemporary Health at RCSJ, Fitness for Life IV or Fitness for Life IV- Indep/Sports	5 credits
CP, Honors or College Level English Composition 101 at RCSJ	5 credits
Financial Literacy or Performing Arts or World Language IV or Electives	5-30 credits

Attention: Understand that registering for a college-level course, means college level credit will be awarded. Regardless of the final grade, this information will be posted to the student's PERMANENT academic transcript at Rowan College of South Jersey. Be aware that unsuccessful completion of these courses may negatively affect a students' eligibility for financial aid in the future

## **Computer Science - Freshman**

### **IT Fundamentals**

**10 credits**

The TestOut IT Fundamentals Pro course is designed for students who are interested in Information Technology but have limited technical knowledge of computing systems. We'll explore foundational concepts related to computer hardware and software, networking, databases, programming, information systems, and data security. This course includes over 100 hands-on labs to reinforce important concepts. As students perform real-world tasks associated with various IT fields, students will gain a broad understanding of career options that will help them refine interests and make career choices. This course also covers all the objectives necessary to pass the TestOut IT Fundamentals Pro and Comp TIA Fundamentals certification exams.

### **Introduction to Cybersecurity**

**2.5 credits**

This course explores cyber trends, threats and staying safe in cyberspace, and protecting personal and company data. Students will learn how to protect personal data and privacy online and in social media. Students will understand why more and more IT jobs require cyber security knowledge and understanding.

### **Microsoft Office & Digital Literacy**

**2.5 credits**

This course teaches the relevant computer concepts and skills needed in today's digital world. You'll learn practical, "real world" skills that can be applied on the job or in the classroom. From basic computer skills to file management and digital citizenship; students will gain a strong foundation before venturing into the world of word processing and spreadsheets and slideshow presentations using Word, Excel, and PowerPoint. This class also prepares the students for the Microsoft Office Specialist: Associate Certification which could lead to college credit for Computer Literacy.

## **Computer Science - Sophomore**

### **IT Essentials**

**10 Credits**

The IT Essentials (ITE) course introduces students to the fundamentals of computer hardware and software, mobile devices, security and networking concepts, and the responsibilities of an IT professional. The latest release includes mobile devices, Linux, and client side virtualization, as well as expanded information about Microsoft Windows operating systems, security, networking, and troubleshooting.

By the end of the course, students will be able to: Describe the internal components of a computer and assemble a computer system, install and understand operating systems on computers and mobile devices, connect to the Internet and share resources in a networked environment, and troubleshoot using system tools and diagnostic software.

## **Fundamentals of Programming**

**5 credits**

In this course students will learn the basic concepts of programming. The fundamental concepts in programming are: variable declaration, basic syntax, data type and structures, flow control structures, functional programming, object-oriented programming, and debugging. Various types of programming will be reviewed.

## **Computer Science – Junior** **CL Networking Essentials**

**15 credits**

This course introduces a variety of topics to build students' skills and understanding of networking. The course also introduces networking devices and the Cisco IOS® software. Students will learn how networks are set up, how devices are configured, how communication takes place on a network and the basics of implementing network security best practices which will enhance the students' confidence in communicating their knowledge and work in networking-related professions. This course includes activities that expand on the course material presented. Upon completion of this course, the end-of-course survey, and the end-of-course assessment, the student will receive a Certificate of Completion.

## **Computer Science – Senior**

1. Take HSOP courses on RCSJ's campus for a discounted fee.
2. Take College English Composition 101 and College Physical Fitness/Contemporary Health on RCSJ's campus and return to GCIT for elective courses that can be found under the "Elective" title in this course guide.
3. Take CP or Honors level English and Fitness for Life and additional electives on GCIT or RCSJ's campus.