Information Technology

Introduction To Information Technology (27101)
Grades: 9 - 12   0.5 Credit   Fall Semester   Online + hands-on component

This exploratory level course provides an exposure to careers and issues in Information Technology. Units prepare students for the industry recognized "Internet and Computing Core Certification" (IC3).This globally recognized certification provides students with the foundation of knowledge needed to excel in fields that involve computers and the Internet. The IC3 Global Standard 3 reflects the most relevant skills for school and business today including: Computing Fundamentals, Key Applications, and Living Online.

IT Essentials – PC Hardware & Operating Systems (27219)
Grade: 9 - 12   0.5 Credit   Spring Semester   Online + hands-on component
Prerequisite – Introduction to Information Technology

***Dual Credit is available through BSC.* Must be in 10th Grade and 16 years of age to enroll in dual credit courses.**
This course presents exposure to computer hardware and operating systems. Students learn how hardware and software components work as well as suggested best practices in maintenance and safety issues. Through hands-on activities and labs, students learn how to physically take apart, assemble, and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. In addition, an introduction to networking is included. This course prepares students for Comp TIA's "A+" certification and/or Comp TIA's "IT Fundamentals" certification exams.

Cybersecurity (27280)
Grade: 10 - 12   0.5 - 1 Credit   Fall/Spring/Full Year   Online + hands-on component

As our world becomes increasingly dependent on technology, cybersecurity is a topic of growing importance. It is crucial that individuals and industry take precautions to protect themselves from the growing threat of cyber-attacks. The fall semester of this course prepares students with beginning knowledge and crucial skills to be responsible citizens in a digital future. Students will learn foundational cybersecurity topics including digital citizenship and cyber-hygiene, the basics of writing and solving codes, software security, networking fundamentals, and basic system administration. Although this is not a coding-intensive course, students will learn basic SQL, and will utilize basic HTML and JavaScript within specific contexts and will be provided supports within those contexts. Students will complete virtual projects at the end of each module.The spring semester will introduce students to best practices businesses use to protect their information as well as techniques individuals can use to protect themselves using social media. Identification of cybercrime, security principles, technologies and security principles to defend industry networks will be covered. A culminating course project where they will complete a simulated cybersecurity hacking experience will occur to build skills and knowledge for students to pursue careers in cybersecurity. ***Dual credit is available through BSC – for Spring Semster Only.* Must be in 10th Grade to enroll in dual credit courses.**

Networking Fundamentals (27266)
Grades: 9 - 12   0.5 Credit   Fall or Spring Semester   Online + hands-on component

This course teaches the basics of networking. It covers how network devices work together, network addressing and services, how to build a home network and design basic security, the basics of configuring Cisco devices, as well as testing and troubleshooting network problems.

NEW! Intro to Programming (27120)
Grade: 9 - 12   0.5 Credit   Fall Semester   Online + hands-on component

This course is designed as an introduction to programming and programming languages such as Python, Java, JavaScript and C++ commonly used in IT careers in industry today. This course will provide students who have no or very little programming knowledge and experience a solid foundation that could be used as a preparation for more advanced programming courses. If you have little or no experience in coding or programming, but have some interest in it, this is the perfect starting course for you!

NEW! Intro to Video Game Design (27130)
Grade: 9 - 12   0.5 Credit   Fall Semester   Online + hands-on component

This course introduces basic video game development using an introductory, web-based coding program called Scratch. Students will build basic coding or computer science skills and a fundamental understanding of game programming. Learners will build beginning pieces of introductory level video games by engaging in the overall design process, controls, event-driven programming, and debugging of a program. This course is designed for beginners with little to no experience in programming and is strongly recommended as a second semester course after Intro to Programming and before Video Game Design.

Coding with JAVA (27125)
Grade: 10 - 12   0.5 Credit   Spring Semester   Online + hands-on component

This course will provide students with a solid base for understanding the main concepts of programming languages. Students will be introduced to the JAVA programming language and complete projects utilizing programming concepts, variables, constants, decision structures and looping structures.

Coding with Python – (27123)
Grade: 10 - 12   0.5 Credit   Fall Semester   Online + hands-on component

Dual credit is available through BSC. **Must be in 10th Grade to enroll in dual credit courses.** This course is an online application-based course in computer programming using Python language; the fastest growing computer language in the world today. The students will develop good problem solving and programming skills while performing several hands-on labs and assignments including gaming. Topics covered include; procedures, mathematical and business functions, arrays and structures, color, sound, and graphics, creating classes, using files, sorting and searching.

Video Game Design   (27131)
Grade: 10 - 12   0.5 Credit   Spring Semester   Online + hands-on component
Prerequisite – Intro to Video Game Design

This course is a continuation of the content and skills learned in Intro to Video Game Design. The course utilizes a blended classroom approach. The content is fully web-based, with student's writing and running code on-line with teachers utilizing other tools and resources such as on-line videoconferencing to give focused 1-on-1 attention to students. Each unit of the course is broken down into lessons consisting of various resources, example programs to explore, and written programming exercises, adding up to over 100 hours of hands-on video game programming practice in total.