**AOIT**

**Course by Grade Level and Course Description**

***Courses by Grade Level***

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| --- | --- | --- | --- |
| **9th Grade** | **10th Grade** | **11th Grade** | **12th Grade** |
| * Digital Graphics and Animation (this course will begin in the 2020-2021 year)
 | * CompTIA Fundamentals
* Fundamentals in HTML, CSS, and JavaScript
 | * Computer Applications
* Computer Science
* Internship during the month of June (before the senior year)
 | Programming Track:* Java Programming
* Creative Coding through Games and Apps

**OR** Non Programming Track:* Ind. Study
* Comp Systems/Networking
 |

**Digital Graphics and Animation (061115)**

(1 credit)

Grade Level: 9th

Fee: $0.00

Prerequisites: Students must be within the Academy of Information Technology

This course will cover digital manipulation through the use of Adobe Photoshop. Students will also be exposed to 3D modeling and 3D printing. This is the required 9th grade course starting the 2020-2021 school year.

**CompTIA IT Fundamentals of Computer Installation and Configure (061130)**

(1 credit)

Grade Level: 10th

Fee: $0.00

Prerequisites: Students must be within the Academy of Information Technology or (if a Jump Start student) they must have permission from Guidance and Counseling.

This course covers foundational IT concepts including identifying and explaining computer components, installing software, establishing network connectivity and preventing security risks. It also addresses protecting, maintaining, and upgrading software and provides troubleshooting techniques. Finally, students get a chance to discover what types of careers exist in systems work today.

Class content prepares students for the CompTIA IT Fundamentals Industry-Based Certification.

**Fundamentals of HTML, CSS, and JavaScript (080523)**

(1 credit)

Grade Level: 10th

Fee: $0.00

Prerequisites: Students must be within the Academy of Information Technology

This course provides a hands-on introduction to designing, building, and launching websites. They learn the basics of coding with HTML, CSS, and JavaScript. Students explore various web development tools while creating, modifying, and animating websites. Drop and drag software is NOT utilized in the creation of sites. All sites are hand coded using a text editor or with software assistance such as Adobe Dreamweaver.

**Computer Applications (061102)**

(1 credit)

Grade Level: 11th

Fee: $0.00

Prerequisites: Students must be within the Academy of Information Technology.

This course prepares students for and offers students the ability to earn Industry Certifications in Microsoft Office as well as providing Internet Computer Core Certifications which capstones the content from Computer Tech I and CompTIA Fundamentals. The second half of the year focuses on workforce development to prepare students for the internship that s/he will be participating in during the month of June.

**AP Computer Science Principles**

(1 credit)

Grade Level: 11th

Fee: $0.00

Prerequisites: Students must be within the Academy of Information Technology or have the permission of the instructor.

Students cultivate their understanding of computer science through working with data, collaborating to solve problems, and developing computer programs as they explore concepts like creativity, abstraction, data and information, algorithms, programming, the internet, and the global impact of computing.

**Internship**

(1 credit)

Grade Level: 12th (June, before the senior year)

Fee: $0.00

Prerequisites: Students must be within the Academy of Information Technology

Students spend 120 hours in a paid internship position. The internship takes place within a local business within the community. This course allows the student to be in the workforce practicing both soft and technical skills, bridging the gap between the classroom and the workforce.

**Java Programming (080521)/AP Computer Science A / DE with LSU CS 1350**

(1 credit)

Grade Level: 12th

Fee: $0.00

Prerequisites: Students must be within the Academy of Information Technology, have earned at least a C in Computer Science I, or permission of instructor.

This course offers an in-depth look at the design and implementation of software engineering within the Java programming language. An emphasis is placed on structured programming and object orientation.

**Independent Study**

(1 credit)

Grade Level: 12th

Fee: $0.00

Prerequisites: Students must be within the Academy of Information Technology.

This course requires students to utilize self-governance and planning skills to meet deadlines for deliverables, extend technology skills in areas of interest, work independently as well as cooperatively in groups as both leader and team member.

**Creative Coding through Games and Apps (061133)**

(1 credit)

Grade Level: 12th

Fee: $0.00

Prerequisites: Students must be within the Academy of Information Technology, have earned at least a C in Computer Science I, and have permission from the instructor.

The first semester of the course is an introduction to iOS app development with Swift. Students will be introduced to the world of app development, Swift, and Xcode. At the end of the course, students apply their programming skills to create one of two basic iOS apps from scratch.

The second semester of the course is an introduction to the principles of interactive two-dimensional and three-dimensional computer game development. Topics covered include computer graphics, algorithms, software engineering, collision detection, random number generation and user input - which form the foundation from which student’s completed projects.

**Computer Systems / Networking I (061112)**

(1 credit)

Grade Level: 12th

Fee: $0.00

Prerequisites: Students must be within the Academy of Information Technology

In this course, students will learn foundational cybersecurity topics including networking fundamentals, software security, and basics of cryptography Additionally, students may be given the opportunity to work with the in-school tech support team and/or earn industry credentials.