INFORMATION TECHNOLOGY
2021-2022

Pathway	Network Administration	Digital Design and Game Development
Industry Certifications Available	• Comp TIA A+	• End of Course Exam
Courses Offered Detailed course descriptions and course requirements are listed below.	• Computer Literacy • Computational Thinking • Introduction to Network Concepts • Computer Hardware and Software Maintenance • Information Tech Co-op • Information Tech Internship	• Computer Literacy • Introduction to Digital Game Graphics • Game Design and Development Principles • Advanced 3D Game Development

Computer Literacy (110110)
Prerequisites: None
1 Credit Open to Grades: 9-12
This course provides an introduction to the computer and the convergence of technology as used in today's global environment. Introduces topics including computer hardware and software, file management, the Internet, e-mail, the social web, green computing, security and computer ethics. Instruction presents basic use of application, programming, systems, and utility software. Basic keyboarding skills are strongly recommended.

Computational Thinking (110251)
Prerequisites: Computer Literacy
1 Credit Open to Grades: 9-12
Computational Thinking promotes understanding of computer programming and logic by teaching students to think like a computer. It covers skills needed to develop and design language-independent solutions to solve computer-related problems. Instruction covers development and design basics including use of variables, control and data structures, and principles of command-line and object-oriented languages.

Introduction to Digital Game Graphics (113601)
Prerequisites: Computer Literacy Open to Grades: 10-12
This course will focus on creating games using code, animation, and an introduction to 3D design software utilized in the industry. In addition, students will see how the skills and knowledge acquired in Game Design I and II come together utilizing a game engine

Game Design and Development Principles (113605)
Prerequisites: Computer Literacy
1 Credit Open to Grades: 10-12
This course is an introduction to Game Design and Gaming. The course provides an overview of story development, gaming history, game reviews, current gaming trends and industry software. Students will begin to create and develop a game story/plot that can be further developed in higher level courses as well as critique current games. In addition, 2D

game development software and image manipulation will be explored to further enhance their design skills. Career exploration into game design will be researched and gain awareness of job and post-secondary opportunities.

Introduction to Networking Concepts (110901)
Prerequisites: Computer Literacy
1 Credit Open to Grades: 10-12
This course introduces technical level concepts of non-vendor specific networking including technologies, media, topologies, devices, management tools, and security. Provides the basics of how to manage, maintain, troubleshoot, install, operate, and configure basic network infrastructure.

Computer Hardware and Software Maintenance (110101)
Prerequisites: Computer Literacy
1 Credit Open to Grades: 10-12
This course presents a practical view of computer hardware and client operating systems. It also covers computer hardware components; troubleshooting, repair, and maintenance; operating system interfaces and management tools; networking components; computer security; and operating procedures.

Information Technology Co-op (110918)
Prerequisite:
- *Student must be enrolled in their 3rd Information Technology pathway course during the same year they are completing the co-op experience. IT co-op CAN count as the 4th pathway credit.*
- *Student must have their own transportation and driver's license.*
- *Student must be employed by the first day of school in a paid position DIRECTLY related to their Information Technology pathway. NO EXCEPTIONS.*

1-2 Credits Open to Grades: 12
This course is a work experience for students who have employment in a recognizable business relating to the career major of Information Tech. Students may leave campus early to gain experience in the workforce.

Information Technology Internship (110919)
Prerequisites:*
- *Consent of Instructor and/or CTE administration*
- *Student must have completed or be enrolled in at least 3 pathway courses (and have at least a B average in these courses) prior to their internship or shadowing opportunity (Internship/Shadowing can count as the 4th pathway credit):*

1-2 credits Open to Grades: 12
The internship provides supervised on-the-job work experience related to the students' education objectives. Students participating in the practicum do not receive compensation. Placement and scheduling will be done on a case-by-case basis.

CIT 105 Introduction to Computers (ACTC)
Prerequisites:
- *An ACT composite Score of 16*
- ***OR** ACT Mathematics subscore of 16 AND ACT Reading subscore of 16;*
- ***OR** any accepted equivalent from KCTCS Assessment and Placement Policy (i.e. KYOTE);*
- ***OR** a high school GPA of 2.5*

1 High School Credit and 3 College Credits Open to Grades: 11-12

Provides an introduction to the computer and the convergence of technology as used in today's global environment. Introduces topics including computer hardware and software, file management, the Internet, e-mail, the social web, green computing, security and computer ethics. Presents basic use of application, programming, systems, and utility software. Basic keyboarding skills are strongly recommended.

CIT 111 Computer Hardware and Software (ACTC)

Prerequisites:

- *An ACT composite Score of 16*
- ***OR** ACT Mathematics subscore of 16 AND ACT Reading subscore of 16;*
- ***OR** any accepted equivalent from KCTCS Assessment and Placement Policy (i.e. KYOTE);*
- ***OR** a high school GPA of 2.5*
- *CIT 105*

1 High School Credit and 3 College Credits Open to Grades: 11-12

Presents a practical view of computer hardware and client operating systems. Covers computer hardware components; troubleshooting, repair, and maintenance; operating system interfaces and management tools; networking components; computer security; and operational procedures. Pre-requisite: (CIT 105 AND MAT 065) OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).

CIT 120 Computational Thinking (ACTC)

Prerequisites:

- *An ACT composite Score of 16*
- ***OR** ACT Mathematics subscore of 16 AND ACT Reading subscore of 16;*
- ***OR** any accepted equivalent from KCTCS Assessment and Placement Policy (i.e. KYOTE);*
- ***OR** a high school GPA of 2.5*

1 High School Credit and 3 College Credits Open to Grades: 11-12

Promotes understanding of computer programming and logic by teaching students to think like a computer. Covers skills needed to develop and design language-independent solutions to solve computer-related problems. Covers development and design basics including use of variables,control and data structures, and principles of commandline and object-oriented languages.

CIT 160 Intro to Networking Concepts (ACTC)

Prerequisites:

- *An ACT composite Score of 16*
- ***OR** ACT Mathematics subscore of 16 AND ACT Reading subscore of 16;*
- ***OR** any accepted equivalent from KCTCS Assessment and Placement Policy (i.e. KYOTE);*
- ***OR** a high school GPA of 2.5*

1 High School Credit and 3 College Credits Open to Grades: 11-12

Introduces technical level concepts of non-vendor specific networking including technologies, media, topologies, devices, management tools, and security. Provides the basics of how to manage, maintain, troubleshoot, install, operate, and configure basic network infrastructure.