COURSE TITLE:	**Introduction to Digital Technology (11.4150000)**
Teacher:	Mr. Gary Liu
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Description: This course introduces students to design, development, support and management of hardware, and software.

Materials: Learn Key and other appropriate software and supplementary materials will be used.

Objectives

Introduction to Digital Technology is the foundational course for Web & Digital Communications, Programming, Advanced Programming, Information Support & Services, and Network Systems pathways. This course is designed for high school students to understand, communicate, and adapt to a digital world as it impacts their personal life, society, and the business world. Exposure to foundational knowledge in hardware, software, programming, web design, IT support, and networks are all taught in a computer lab with hands-on activities and projectfocused tasks. Students will not only understand the concepts, but apply their knowledge to situations and defend their actions/decisions/choices through the knowledge and skills acquired in this course. Employability skills are integrated into activities, tasks, and projects throughout the course standards to demonstrate the skills required by business and industry. Competencies in the co-curricular student organization, Future Business Leaders of America (FBLA), are integral components of both the employability skills standards and content standards for this course. Various forms of technologies will be highlighted to expose students to the emerging technologies impacting the digital world. Professional communication skills and practices, problem-solving, ethical and legal issues, and the impact of effective presentation skills are taught in this course as a foundational knowledge to prepare students to be college and career ready. The knowledge and skills taught in this course build upon each other to form a comprehensive introduction to digital world.

Introduction to Digital Technology is a course that is appropriate for all high school students. The pre-requisite for this course is advisor approval. Please see attached full version of the standards.

Homework
Late Work: Homework will be assigned, collected, and graded throughout the duration of the course. Late work will be accepted with a 10 - POINT DEDUCTION per day up to 3 days. **A grade of 50 will be given after three days up to the last day grades are entered for the corresponding progress report** (exception Semester Report - Final Grade). Thereafter, a grade of zero will be given unless special arrangements have been made with me before the deadline. Some credit is better than no credit!

Missed Work
Due to Absences: Students are expected to be present. However, when applicable, it is the responsibility of the student to complete missed assignments, projects, quizzes, tests etc. within 1 week **A grade of zero will be given after 1 week unless special arrangements have been made with me before the deadline.** Students who have an **EXCUSED ABSENCE** will be allowed to turn in their missing work with no deductions. Students with an **UNEXCUSED ABSENCE** will be allowed to turn in their work with a **10 - POINT DEDUCTION**. Please fill out an absentee sheet and attach it to your missed work before turning it in.

Make-up work can be completed on Thursday's beginning at 4:00pm. If the student misses his/her appointment; he or she can reschedule once, thereafter, the grade becomes a zero.

Recovery: The intent of the recovery policy is to assist students by providing adequate opportunities to master course objectives in order to eliminate preventable failures.

Opportunities designed to allow students to recover from a low or failing **cumulative** grade will be allowed when **all work required to date has been completed** and **the student has demonstrated a legitimate effort to meet all course requirements including attendance**. Students must complete the work before they can recover it. Clearly there is a difference between recovery and make-up work. The recovery policy for this course is as follows:

- ❏ Recovery is for students who are failing, or close to failing (low cumulative grade).
- ❏ Recovery is for a cumulative grade, not for one test, project, etc.
- ❏ Students may recover up to a maximum grade of 70 on recovery work.
- ❏ Recovery must be student initiated.
- ❏ Recovery work will not be granted to change a grade after a semester is over.
- ❏ All recovery work must be completed within ten school days prior to the end of the

semester.
- ❑ The recovery assignment is at my discretion.
- ❑ I will establish a reasonable time period for recovery work to be completed during the semester.

Instructional Methodologies: Class lecture/discussion/demonstration, audio-visual aids, individualized instruction, guest speakers, field trips by grade level (if applicable).

Discipline: All student handbook rules apply. In addition students are expected to take care of equipment, textbooks, and supplies, as well as, exhibit respect for fellow students and faculty members. Please see guidelines posted in class.

Parent/Teacher Communication: Communication with parents about academic progress, behavior and attendance will be handled via progress reports, e-mail, phone contact, conference, or a combination of these methods.

Career Opportunities: Software Engineer, Technology Specialist, software developer, game developer

Test/Quizzes: Tests will be based on information in the text that will be covered in class and any other supplementary information given in notes. Students Academic Portfolio will count as one major test grade. Information on the procedures and format of your student portfolio will follow.

Class Works: Class works includes students' participation, assignments and quizzes. There will be several assignments and small presentations. Each person is expected to do their part.

Work Ethics: Each student must demonstrate good work ethics in class (i.e. punctuality, not interfering with the learn process of another student, compliance to classroom rules, etc.). Failure to do so will cause your work ethic grades to suffer.

Grading Evaluation:

Daily Work	45%
Final Exam	15%
Project	10%
Quizzes/Tests	20%
Work Ethics	10%

Grading Scale:

100-90	A
89-80	B
79-70	C
Below 70	F

Tutorial: Tutorial time is 8:00am on Monday through Thursday. After school by appointment only.

All Tri Cities students are required to have an Academic Portfolio for each of their classes. Academic Portfolios must be maintained in electronic format by following the template provided.

Each student will be expected to bring to class daily his/her notebook, workbook, paper, pencil and any other needed classroom supplies and materials.

The Georgia Department of Education has made available two assessments to ascertain the competence of our career technology students. The assessments are Work-Ready and End-of-Pathway. The Work-Ready assessment measures the skills of Georgia's workers, determines valuable job training opportunities, and assures companies that the state can provide a long-term, qualified labor supply, and is a requirement for some Georgia jobs. The End-of-Pathway assessment measures the level of technical skill attainment of each career pathway completer. The Work-Ready assessment will be administered to all work-based learning students and all seniors currently enrolled in a CTE course. The End-of-Pathway assessments will be administered to all CTE students who have finished or are finishing a pathway. Tests will be administered in October and April.

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Student Name _____

I have read this course syllabus and I understand all information presented. In the event that I have questions, I will contact the teacher.

_____
Parent/Guardian Signature

I have read this course syllabus and I understand all information presented. I understand that I must use the Internet for educational purposes only. In the event that I have questions, I will ask my teacher.

_____
Student Signature

Course Standard 1
IT-IDT-1
Demonstrate employability skills required by business and industry.
The following elements should be integrated throughout the content of this course.
1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.
1.2 Demonstrate creativity with multiple approaches to ask challenging questions resulting in innovative procedures, methods, and products.
1.3 Exhibit critical thinking and problem solving skills to locate, analyze, and apply information in career planning and employment situations.
1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.
1.5 Apply the appropriate skill sets to be productive in a changing, technological, and diverse workplace to be able to work independently, interpret data, and apply team work skills.
1.6 Present a professional image through appearance, behavior, and language.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
L9-10RST 1-10 and **L9-10WHST 1-10:** Common Core ELA/Literacy standards have been written specifically for technical subjects and have been adopted as part of the official standards for all CTAE courses. Additional Common Core GPS for Speaking and Listening are listed in the foundational standards below.

Course Standard 2
IT-IDT-2
Explore, research, and present findings on positions and career paths in technology and the impact of technology on chosen career area.
2.1 Develop technical reading and writing skills to follow instructions.
2.2 Work in a team to solve problems and share knowledge.
2.3 Explore the impact of digital technology on careers including non-traditional technology fields and careers in each of the Georgia Career Clusters.
2.4 Use collaborative tools to communicate with team members.
2.5 Describe how computing enhances traditional careers, and enables new careers.
2.6 Research post-secondary options for continuing education in IT field.
2.7 Research IT credentials needed and job requirements in various occupations.
2.8 Describe the impact of having web design skills to build skills for chosen career.
2.9 Explore the game design industry for design, creation, and career options.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
ELACC9-10SL2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Course Standard 3
IT-IDT-3
Demonstrate effective professional communication skills (oral, written, and digital) and practices that enable positive customer relationships.
3.1 Recognize the importance of all customers to a business.
a. Identify organization's products and services.
b. State the IT influence and impact on business.
c. Communicate how technology can be used to create a solution to business challenge and present to customer in professional business format.
3.2 Demonstrate ability to assist customers in a professional manner.
a. Actively listen to customers.
b. Determine customers' individual needs.
c. Project a professional business image (e.g., appearance, voice, grammar, word usage, enunciation, nonverbal communication).
d. Interact with customers and colleagues in a professional manner (e.g., prompt, friendly, courteous, respectful, helpful, knowledgeable, and understandable).
e. Ensure that your assistance promotes the best interests of the company.
3.3 Determine the best method to maintain a customer list and communication platform.
3.4 Demonstrate understanding of word processing, spreadsheet, presentation, and database software as a communication tool for business.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
ELACC9-10SL2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Course Standard 4
IT-IDT-4
Identify, describe, evaluate, select and use appropriate technology.
4.1 Identify hardware device functions, including peripherals devices, input devices, and portable hardware appropriate for specific tasks and emerging hardware as it impacts information technology.
4.2 Demonstrate understanding of set up a basic computer workstation.
a. Identify various computer types, internal components, connectors, monitors, keyboards, mice, printers, computer voltage, and power requirements.
4.3 Describe and explore current and emerging software, including operating systems and application software.
a. Explain the function and purpose of software tools.
4.4 Compare and contrast various hardware and software options for personal and business use.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and

issues, building on others' ideas and expressing their own clearly and persuasively.
ELACC9-10SL2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Course Standard 5
IT-IDT-5
Understand, communicate, and adapt to a digital world.
5.1 Develop a working IT vocabulary.
5.2 Describe trends in emerging, evolving, and future computer technologies and their influence on IT practices.
a. Mobile technology, computing tablets, cloud computing.
5.3 Recognize online risks and dangers in order to take appropriate actions to protect the business and self while using digital tools and resources.
5.4 Demonstrate ability to access, navigate and use online resources and technologies.
5.5 Define and demonstrate folder and file management and the importance of data back-up procedures.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
ELACC9-10SL2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Course Standard 6
IT-IDT-6
Explore and explain the basic components of computer networks.
6.1 Develop a working networking vocabulary including networking media, topologies, network operating systems, models and protocols, codes and standards, addressing, diagnostics, routing, WAN services, network security networking software, tools, and equipment.
6.2 Illustrate and describe the functions of various types of networks including wireless.
6.3 Explain key issues in data transmission.
6.4 Characterize the purposes, features and functions of the following network components: Switches, Bridges, Routers, Gateways, CSU / DSU, NICs, ISDN adapters, WAPs, Modems, Transceivers, Firewalls.
6.5 Identify factors which affect the range and speed of wireless service.
6.6 Explore networking trends and issues affecting business and personal use.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
ELACC9-10SL2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Course Standard 7
IT-IDT-7
Use computational thinking procedures to analyze and solve problems.
7.1 Apply strategies for identifying routine hardware and software problems current to everyday life.
7.2 Identify compatibility issues and describe operational problems caused by hardware errors.
7.3 Explain how technology can be used to solve problems.
7.4 Explain software development process used to solve problems.
7.5 Explore commonly used documentation tools for design specifications.
a. Flowcharts, visual and textual storyboards.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
ELACC9-10SL2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Course Standard 8
IT-IDT-8
Create and organize webpages through the use of a variety of web programming design tools.
8.1 Understand and apply design principles to create professional appearing and functioning web pages.
8.2 Understand elements of web design.
a. HTML, CSS, responsive design, site usability, relation of site to business, story the site reveals about the business.
8.3 Design simple webpages incorporating media elements (e.g., sound, video, graphics, text, motion graphics), navigation, and linking.
8.4 Explain the impact of mobile sites on the development of business.
8.5 Explore the trends and emerging issues for websites.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
ELACC9-10SL2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Course Standard 9
IT-IDT-9
Design, develop, test and implement programs using visual programming.
9.1 Utilize drag and drop software to develop programs.
9.2 Understand and use objects.
9.3 Explain how sequence, selection, iteration are building blocks of algorithms.
9.4 Explore mobile devices/emulators to design develop and implement mobile computing applications.
9.5 Use various debugging and testing methods to ensure program correctness.
9.6 Describe a variety of programming languages used to solve problems.
9.7 Incorporate music and art to enhance creativity in projects.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
ELACC9-10SL2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
ELACC9-10SL5: Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

Course Standard 10
IT-IDT-10
Describe, analyze, develop and follow policies for managing ethical and legal issues in the business world and in a technology-based society.
10.1 Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.
10.2 Recognize the ethical and legal issues while accessing, creating, and using digital tools and resources in order to make informed decisions.
10.3 Exercise digital citizenship as a lifelong learner.
a. Promote and model digital etiquette and responsible social technology interactions, permanence of digital footprints, online image and presence, etc.
10.4 Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
10.5 Describe personal and legal consequences of inappropriate use of resources and online content.
a. Plagiarism, piracy, illegal downloading, copy-right infringement, licensing infringement, inappropriate use of software, hardware and mobile devices.
10.6 Identify security issues and trends affecting computers and information privacy.
a. Virus, open or free networks, user control methods, file sharing, etc.
10.7 Describe the use of computer forensics to prevent and solve information technology crimes and security breaches.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
ELACC9-10SL2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Course Standard 11
IT-IDT-11
Explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events.
11.1 Explain the goals, mission and objectives of Future Business Leaders of America.
11.2 Explore the impact and opportunities a student organization (FBLA) can develop to bring business and education together in a positive working relationship through innovative leadership and career development programs.
11.3 Explore the local, state, and national opportunities available to students through participation in related student organization (FBLA) including but not limited to conferences, competitions, community service, philanthropy, and other FBLA activities.
11.4 Explain how participation in career and technology education student organizations can promote lifelong responsibility for community service and professional development.
11.5 Explore the competitive events related to the content of this course and the required competencies, skills, and knowledge for each related event for individual, team, and chapter competitions.

Support of CTAE Foundation Course Standards and Common Core GPS and Georgia Performance Standards
ELACC9-10SL1: Initiate and participate effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
ELACC9-10SL4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Introduction of Digital Technology
Pacing Guide

Week	Standards	Assessment
2 Weeks	**Course Standard 1** **IT-IDT-1** **Demonstrate employability skills required by business and industry.** The following elements should be integrated throughout the content of this course. 1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. 1.2 Demonstrate creativity with multiple approaches to ask challenging questions resulting in innovative procedures, methods, and products. 1.3 Exhibit critical thinking and problem solving skills to locate, analyze, and apply information in career planning and employment situations. 1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. 1.5 Apply the appropriate skill sets to be productive in a changing, technological, and diverse workplace to be able to work independently, interpret data, and apply team work skills. 1.6 Present a professional image through appearance, behavior, and language.	Project 1: Career and Education
1 week	**Course Standard 2** **IT-IDT-2** **Explore, research, and present findings on positions and career paths in technology and the impact of technology on chosen career area.** 2.1 Develop technical reading and writing skills to follow instructions. 2.2 Work in a team to solve problems and share knowledge. 2.3 Explore the impact of digital technology on careers including non-traditional technology fields and careers in each of the Georgia Career Clusters. 2.4 Use collaborative tools to communicate with team members. 2.5 Describe how computing enhances traditional careers, and enables new careers. 2.6 Research post-secondary options for continuing education in IT field. 2.7 Research IT credentials needed and job requirements in various occupations. 2.8 Describe the impact of having web design skills to build skills for chosen career.	Project 1: Career and Education

	2.9 Explore the game design industry for design, creation, and career options.	
2 weeks	**Course Standard 3** **IT-IDT-3** **Demonstrate effective professional communication skills (oral, written, and digital) and** **practices that enable positive customer relationships.** 3.1 Recognize the importance of all customers to a business. a. Identify organization's products and services. b. State the IT influence and impact on business. c. Communicate how technology can be used to create a solution to business challenge and present to customer in professional business format. 3.2 Demonstrate ability to assist customers in a professional manner. a. Actively listen to customers. b. Determine customers' individual needs. c. Project a professional business image (e.g., appearance, voice, grammar, word usage, enunciation, nonverbal communication). d. Interact with customers and colleagues in a professional manner (e.g., prompt, friendly, courteous, respectful, helpful, knowledgeable, and understandable). e. Ensure that your assistance promotes the best interests of the company. 3.3 Determine the best method to maintain a customer list and communication platform. 3.4 Demonstrate understanding of word processing, spreadsheet, presentation, and database software as a communication tool for business.	Project 2: Social Media and Ethics
3 weeks	**Course Standard 4** **IT-IDT-4** **Identify, describe, evaluate, select and use appropriate technology.** 4.1 Identify hardware device functions, including peripherals devices, input devices, and portable hardware appropriate for specific tasks and emerging hardware as it impacts information technology. 4.2 Demonstrate understanding of set up a basic computer workstation. a. Identify various computer types, internal components, connectors, monitors, keyboards, mice, printers, computer voltage, and power requirements. 4.3 Describe and explore current and emerging software, including operating systems and application software. a. Explain the function and purpose of software tools. 4.4 Compare and contrast various hardware and software	Project 3: A decision to buy a computer

	options for personal and business use.	
4 weeks	**Course Standard 3** **IT-IDT-3** **Demonstrate effective professional communication skills (oral, written, and digital) and** **practices that enable positive customer relationships.** 3.1 Recognize the importance of all customers to a business. a. Identify organization's products and services. b. State the IT influence and impact on business. c. Communicate how technology can be used to create a solution to business challenge and present to customer in professional business format. 3.2 Demonstrate ability to assist customers in a professional manner. a. Actively listen to customers. b. Determine customers' individual needs. c. Project a professional business image (e.g., appearance, voice, grammar, word usage, enunciation, nonverbal communication). d. Interact with customers and colleagues in a professional manner (e.g., prompt, friendly, courteous, respectful, helpful, knowledgeable, and understandable). e. Ensure that your assistance promotes the best interests of the company. 3.3 Determine the best method to maintain a customer list and communication platform. 3.4 Demonstrate understanding of word processing, spreadsheet, presentation, and database software as a communication tool for business.	Project 4: Office Software Project 5: Application software and online collaboration Project 6: Online communication
2 week	**IT-IDT-5** **Understand, communicate, and adapt to a digital world.** 5.1 Develop a working IT vocabulary. 5.2 Describe trends in emerging, evolving, and future computer technologies and their influence on IT practices. a. Mobile technology, computing tablets, cloud computing. 5.3 Recognize online risks and dangers in order to take appropriate actions to protect the business and self while using digital tools and resources. 5.4 Demonstrate ability to access, navigate and use online resources and technologies. 5.5 Define and demonstrate folder and file management and the importance of data back-up procedures.	Project 7: mobile devices and future of communication Group Project: A comparison of mobile devices

1 week	**IT-IDT-6** **Explore and explain the basic components of computer networks.** 6.1 Develop a working networking vocabulary including networking media, topologies, network operating systems, models and protocols, codes and standards, addressing, diagnostics, routing, WAN services, network security networking software, tools, and equipment. 6.2 Illustrate and describe the functions of various types of networks including wireless. 6.3 Explain key issues in data transmission. 6.4 Characterize the purposes, features and functions of the following network components: Switches, Bridges, Routers, Gateways, CSU / DSU, NICs, ISDN adapters, WAPs, Modems, Transceivers, Firewalls. 6.5 Identify factors which affect the range and speed of wireless service. 6.6 Explore networking trends and issues affecting business and personal use.	Project 7: mobile devices and future of communication
4 weeks	**Course Standard 3** **IT-IDT-3** **Demonstrate effective professional communication skills (oral, written, and digital) and** **practices that enable positive customer relationships.** **3.1 Recognize the importance of all customers to a business.** **a. Identify organization's products and services.** **b. State the IT influence and impact on business.** **c. Communicate how technology can be used to create a solution to business challenge** **and present to customer in professional business format.** **3.2 Demonstrate ability to assist customers in a professional manner.** **a. Actively listen to customers.** **b. Determine customers' individual needs.** **c. Project a professional business image (e.g., appearance, voice, grammar, word usage,** **enunciation, nonverbal communication).** **d. Interact with customers and colleagues in a professional manner (e.g., prompt, friendly,** **courteous, respectful, helpful, knowledgeable, and understandable).** **e. Ensure that your assistance promotes the best interests of the company.** **3.3 Determine the best method to maintain a customer list and communication platform.** **3.4 Demonstrate understanding of word processing, spreadsheet, presentation, and database** **software as a communication tool for business.**	Final Project A Technology Plan for Your Small Business

	IT-IDT-5 **Understand, communicate, and adapt to a digital world.** 5.1 Develop a working IT vocabulary. 5.2 Describe trends in emerging, evolving, and future computer technologies and their influence on IT practices. a. Mobile technology, computing tablets, cloud computing. 5.3 Recognize online risks and dangers in order to take appropriate actions to protect the business and self while using digital tools and resources. 5.4 Demonstrate ability to access, navigate and use online resources and technologies. 5.5 Define and demonstrate folder and file management and the importance of data back-up procedures.	
2 weeks	**IT-IDT-7** **Use computational thinking procedures to analyze and solve problems.** 7.1 Apply strategies for identifying routine hardware and software problems current to everyday life. 7.2 Identify compatibility issues and describe operational problems caused by hardware errors. 7.3 Explain how technology can be used to solve problems. 7.4 Explain software development process used to solve problems. 7.5 Explore commonly used documentation tools for design specifications. a. Flowcharts, visual and textual storyboards.	Project 8: documentation and flow chart of an animation
6 weeks	**IT-IDT-9** **Design, develop, test and implement programs using visual programming.** 9.1 Utilize drag and drop software to develop programs. 9.2 Understand and use objects. 9.3 Explain how sequence, selection, iteration are building blocks of algorithms. 9.4 Explore mobile devices/emulators to design develop and implement mobile computing applications. 9.5 Use various debugging and testing methods to ensure program correctness. 9.6 Describe a variety of programming languages used to solve problems. 9.7 Incorporate music and art to enhance creativity in projects.	Project 9: animated story Project 10: target game Project 11: multi-level game project
	IT-IDT-8	

6 weeks	**Create and organize webpages through the use of a variety of web programming design tools.** 8.1 Understand and apply design principles to create professional appearing and functioning web pages. 8.2 Understand elements of web design. a. HTML, CSS, responsive design, site usability, relation of site to business, story the site reveals about the business. 8.3 Design simple webpages incorporating media elements (e.g., sound, video, graphics, text, motion graphics), navigation, and linking. 8.4 Explain the impact of mobile sites on the development of business. 8.5 Explore the trends and emerging issues for websites.	Project 12: simple html5/css page. Project 13: web site and file management Project 14: multimedia and javascript
2 weeks	**IT-IDT-10** **Describe, analyze, develop and follow policies for managing ethical and legal issues in the business world and in a technology-based society.** 10.1 Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors. 10.2 Recognize the ethical and legal issues while accessing, creating, and using digital tools and resources in order to make informed decisions. 10.3 Exercise digital citizenship as a lifelong learner. a. Promote and model digital etiquette and responsible social technology interactions, permanence of digital footprints, online image and presence, etc. 10.4 Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. 10.5 Describe personal and legal consequences of inappropriate use of resources and online content. a. Plagiarism, piracy, illegal downloading, copy-right infringement, licensing infringement, inappropriate use of software, hardware and mobile devices. 10.6 Identify security issues and trends affecting computers and information privacy. a. Virus, open or free networks, user control methods, file sharing, etc. 10.7 Describe the use of computer forensics to prevent and solve information technology crimes and security breaches.	Project 15: legal vs. ethical Project 16: a virus research
2 weeks	**IT-IDT-11** **Explore how related student organizations are**	Final Career Project

| | **integral parts of career and technology education courses through leadership development, school and community service projects**, **entrepreneurship development, and competitive events.**
11.1 Explain the goals, mission and objectives of Future Business Leaders of America.
11.2 Explore the impact and opportunities a student organization (FBLA) can develop to bring business and education together in a positive working relationship through innovative leadership and career development programs.
11.3 Explore the local, state, and national opportunities available to students through participation in related student organization (FBLA) including but not limited to conferences, competitions, community service, philanthropy, and other FBLA activities.
11.4 Explain how participation in career and technology education student organizations can promote lifelong responsibility for community service and professional development.
11.5 Explore the competitive events related to the content of this course and the required competencies, skills, and knowledge for each related event for individual, team, and chapter competitions. | |