Introduction to Digital Technology
Course Syllabus
Dutchtown High School

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Year: 2015 - 2016 **Room:** 407

Department: Career, Technology, and Agricultural Education (Business and Computer Science)

Description:
Introduction to Digital Technology is the foundational course for Web & Digital Communications. It 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. Units include hardware, software, programming, web design, IT support, and networks. All are taught in a computer lab with hands-on activities and project-focused 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.

Prerequisites: Introduction to Digital Technology is a course that is appropriate for all high school students. The pre-requisite for this course is advisor approval.

Career Opportunities: Web Developers, Computer & Information Research Scientists, Computer System Analysts, Computer Programmers, Software Developers, Computer Systems Engineers/Architects, Web Administrators, Computer & Information Systems Managers, Computer Network Architects, Computer Operators

Professional Dress: The CTAE department will be promoting department-wide Professional Dress Days again this year. Students are expected to dress in casual business attire. This includes, but is not limited to, a shirt with a collar; black, blue or khaki slacks or skirts; professional shoes. Business attire does not include jeans, shorts, flip flops, or athletic shoes. Scrubs may be worn for appropriate classes. Students will have to wear this attire for the duration of the school day to receive credit. The grading of the Professional Dress will be at the discretion of the teacher.

End of Pathway Assessment: Students who have completed all three courses in the Web and Digital Communications pathway will complete an end of pathway assessment. The courses in this pathway include Introduction to Digital Media, Digital Media and Communications, and Web Design. This assessment is not an optional component, but is required by the state of Georgia.

Recommended Materials:
- USB Drive
- Notebook Paper
- Pen or Pencil
- Ear buds (used as needed)
- Access to professional dress one day each month

CTAE Bring Your Own Technology Policy: Students enrolled in courses that meet in a computer lab are expected to complete assignments using the computers provided in the classroom. Students may not use their "personal technology" to complete these assignments. Other CTAE teachers may allow or require use of technology devices in their classrooms on an as needed basis. Teachers reserve the right to determine when technology must be put away.

Grading Policy:

Classwork /Practice Work / Homework	20%
Projects	45%
Assessments	35%

Introduction to Digital Technology Classroom Rules

You should treat this class much like an actual business environment. Therefore, you should treat all expectations as criteria for evaluation of your performance as an employee. In this class you are expected to:

- Come to class on time every day. Good employees are rarely late for work and are usually early. (LEADER TIME)
- Bring required material to class.
- Stay on task at all times.
- Attend class unless completely unavoidable. If you are ill and could make others sick, you have reason to miss school. Not feeling 100 percent is not an excuse. Most jobs only allow a certain number of sick days per year.
- Only surf the net for personal use the last 5 minutes of the period. You don't get to surf the net during free time at work.
- NO LATE WORK POLICY. When an employer asks for a task to be completed, he/she expects it to be done in a timely manner and submitted on the due date. All assignments for the week must be turned in by Friday. After Friday, late work will not be accepted.
- Rolling around the room in the chairs is not accepted!
- Keep workspace clean and tidy. Clean up scrap paper and keep all class materials neatly on your desk. (HOME SWEET HOME)
- Have a good attitude; everyone has bad days. Don't let a bad day make you a bad person to be around.
- Respect each other: respect the ideas of others; respect others' property. Don't belittle someone simply because you don't agree. Be polite. Don't bother other people's materials.
- Plan to complete your Internet research and make your printouts at home or in the media center, not during my class. Printouts for other class assignments are now .05 per page. Funds collected will be used to purchase classroom supplies as needed. Excess funds at the end of the year will be donated to the March of Dimes.
- **Be your best!**

Course Standards

IT-IDT-1 Demonstrate employability skills required by business and industry.

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.

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.

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.
3.2 Demonstrate ability to assist customers in a professional manner.
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.

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.
4.3 Describe and explore current and emerging software, including operating systems and application software.
4.4 Compare and contrast various hardware and software options for personal and business use.

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.
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.

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.

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.

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.
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.

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.

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.
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.
10.6 Identify security issues and trends affecting computers and information privacy.
10.7 Describe the use of computer forensics to prevent and solve information technology crimes and security breaches.
10.8 Identify criminal activity in relationship to cybercrime, the Internet, and Internet trafficking.

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.