

**DIGITAL TECHNOLOGIES**  
**COURSE CODE: 5180**

**COURSE DESCRIPTION:** Digital Technologies introduces students to new and emerging technologies that are impacting the way we utilize information when accessing computers and other technology devices. With the use of tablets, iPads, Smartphones, and other digital devices, students will design, develop, and create projects using speech recognition software, mobile applications, and online collaborative tools for personal and business applications. Students' work will be showcased in an e-portfolio.

**RECOMMENDED GRADE LEVEL:** 9 - 12

**COURSE CREDIT:** 1 Carnegie unit

**PREREQUISITE:** None

**RESOURCES:** [S.C. Instructional Textbooks and Materials](#)

**RECOMMENDED SOFTWARE:** Speech Recognition, Audio, Sound, Video, Animation

**A. SAFETY**

**Effective professionals know the academic subject matter, including safety as required for proficiency within their area. They will use this knowledge as needed in their role. The following accountability criteria are considered essential for students in any program of study.**

1. Review school safety policies and procedures.
2. Review classroom safety rules and procedures.
3. Review safety procedures for using equipment in the classroom.
4. Identify major causes of work-related accidents in office environments.
5. Demonstrate safety skills in an office/work environment.

**B. STUDENT ORGANIZATIONS**

**Effective professionals know the academic subject matter, including professional development, required for proficiency within their area. They will use this knowledge as needed in their role. The following accountability criteria are considered essential for students in any program of study.**

1. Identify the purpose and goals of a Career and Technology Student Organization (CTSO).
2. Explain how CTSOs are integral parts of specific clusters, majors, and/or courses.
3. Explain the benefits and responsibilities of being a member of a CTSO.
4. List leadership opportunities that are available to students through participation in CTSO conferences, competitions, community service, philanthropy, and other activities.

5. Explain how participation in CTSOs can promote lifelong benefits in other professional and civic organizations.

### **C. TECHNOLOGY KNOWLEDGE**

**Effective professionals know the academic subject matter, including digital citizenship the ethical use of technology and as needed in their role. The following accountability criteria are considered essential for students in any program of study.**

1. Demonstrate proficiency and skills associated with the use of technologies that are common to a specific occupation.
2. Identify proper netiquette when using e-mail, social media, and other technologies for communication purposes.
3. Identify potential abuse and unethical uses of laptops, tablets, computers, and/or networks.
4. Explain the consequences of social, illegal, and unethical uses of technology (e.g., piracy; illegal downloading; cyberbullying; licensing infringement; inappropriate uses of software, hardware, and mobile devices in the work environment).
5. Discuss legal issues and the terms of use related to copyright laws, fair use laws, and ethics pertaining to downloading of images, photographs, documents, video, sounds, music, trademarks, Creative Commons, and other elements for personal use.
6. Describe ethical and legal practices of safeguarding the confidentiality of business-related information.
7. Describe possible threats to a laptop, tablet, computer, and/or network and methods of avoiding attacks.

### **D. PERSONAL QUALITIES AND EMPLOYABILITY SKILLS**

**Effective professionals know the academic subject matter, including positive work practices and interpersonal skills, as needed in their role. The following accountability criteria are considered essential for students in any program of study.**

1. Demonstrate punctuality.
2. Demonstrate self-representation.
3. Demonstrate work ethic.
4. Demonstrate respect.
5. Demonstrate time management.
6. Demonstrate integrity.
7. Demonstrate leadership.
8. Demonstrate teamwork and collaboration.
9. Demonstrate conflict resolution.
10. Demonstrate perseverance.
11. Demonstrate commitment.
12. Demonstrate a healthy view of competition.

13. Demonstrate a global perspective.
14. Demonstrate health and fitness.
15. Demonstrate self-direction.
16. Demonstrate lifelong learning.

## **E. PROFESSIONAL KNOWLEDGE**

**Effective professionals know the academic subject matter, including positive work practices and interpersonal skills, as needed in their role. The following accountability criteria are considered essential for students in any program of study.**

1. Demonstrate effective speaking and listening skills.
2. Demonstrate effective reading and writing skills.
3. Demonstrate mathematical reasoning.
4. Demonstrate job-specific mathematics skills.
5. Demonstrate critical-thinking and problem-solving skills.
6. Demonstrate creativity and resourcefulness.
7. Demonstrate an understanding of business ethics.
8. Demonstrate confidentiality.
9. Demonstrate an understanding of workplace structures, organizations, systems, and climates.
10. Demonstrate diversity awareness.
11. Demonstrate job acquisition and advancement skills.
12. Demonstrate task management skills.
13. Demonstrate customer-service skills.

## **F. EXPLORING DIGITAL TECHNOLOGIES**

**Effective business professionals demonstrate an awareness of new and emerging digital technology and appropriate usage, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Research developments in new and emerging technologies.
2. Identify specific emerging technologies and applications and their uses for lifelong learning.
3. Identify how emerging technologies and applications can be modified for disabled individuals and how they are related to the workplace.
4. Identify emerging technologies and applications relating to the globalization of business (e.g., GPS, geotagging, translation software).
5. Identify business ethics and etiquette expected in the workplace in the use of new and emerging technologies.

## **G. SPEECH RECOGNITION: PREPARING TO USE THE TOOLS**

**Effective business professionals demonstrate appropriate knowledge of speech recognition software, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Identify terminology associated with new and emerging speech-recognition technologies.
2. Train speech-recognition software to recognize user's voice through the training/enrollment process.
3. Test microphone and audio settings.
4. Improve accuracy by completing additional activities in the user speech profile.

## **H. SPEECH RECOGNITION: USING BASIC TECHNIQUES**

**Effective business professionals demonstrate appropriate usage of speech recognition software, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Activate and deactivate a microphone.
2. Demonstrate a variety of speech commands to operate speech-recognition software.
3. Remove text from the screen with speech commands.
4. Dictate from prepared text for speech-recognition software input.
5. Dictate student-composed text for speech-recognition software input.
6. Navigate a document using speech commands.
7. Save selected text using speech commands.
8. Integrate speech commands, keyboarding strokes, touch controls, gesture input, and mouse input.
9. Integrate text into other applications using speech commands.

## **I. SPEECH RECOGNITION: EDITING AND FORMATTING TECHNIQUES**

**Effective business professionals demonstrate appropriate editing and formatting skills using speech recognition software, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Use correction functions to improve a speech profile.
2. Dictate line and paragraph breaks.
3. Insert punctuation using the dictation and auto-punctuation function.
4. Demonstrate the use of speech commands to format text.
5. Use commands for capitalization and formatting fonts.
6. Use voice commands to select, copy, delete, and move text.
7. Dictate various types of data.
8. Dictate numbers, decimals, fractions, mathematical formulas, symbols, and special characters.

9. Dictate dates, phone numbers, currency, Web and e-mail addresses, and times of day.
10. Add words, including names, to a speech-recognition dictionary using the "add word" feature.
11. Select commands from the Help menu.
12. Format text using speech commands.
13. Create bulleted and numbered lists.
14. Capitalize titles or headings using speech commands.
15. Demonstrate voice recognition skills when using the various applications in the Microsoft Office Suite. *(When Digital Technologies is offered for one Carnegie unit of credit, this standard will be extensive.)*

## **J. MOBILE DEVICES: INTRODUCTION**

**Effective business professionals demonstrate appropriate knowledge and usage of mobile devices, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Identify terminology associated with new and emerging mobile devices.
2. View user tutorials.
3. Open applications that are standard on mobile devices.
4. Use features and controls on mobile devices.
5. Save data to the Cloud so it will be accessible from a PC, file-hosting service, smartphone, and other devices.
6. Explain safe Web usage practices.

## **K. MOBILE DEVICES: NAVIGATION AND FUNCTIONS**

**Effective business professionals demonstrate effective knowledge and usage of mobile devices, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Navigate mobile devices (smartphones, tablets, e-readers, etc.) using the input options.
2. Create a note.
3. Create an entry in contacts.
4. Edit an entry in contacts.
5. Search for an entry in contacts.
6. Create a personal business card with a business card application.
7. Add an appointment to the calendar.
8. Edit an entry in the calendar.
9. Set an alarm in the calendar.
10. Create a reminder in the task list.
11. Edit a task list item.
12. Prioritize a task item.
13. Manage reminders for a task.
14. Attach a note to a reminder.
15. Edit a note.
16. Search for a note.

17. Delete a note.
18. Solve a mathematical problem using a calculator feature.
19. Create a personal financial account using a personal finance application.
20. Create a spreadsheet.
21. Enter a URL address to locate a Web site. (Optional based on Internet connection limitations and acceptable use policies.)
22. Navigate the Internet. (Optional based on Internet connection limitations and acceptable use policies.)
23. Manage e-mail. (Optional based on Internet connection limitations and acceptable use policies.)
24. Use instant Messaging. (Optional based on Internet connection limitations and acceptable use policies.)

## **L. MOBILE DEVICES: ADDITIONAL FEATURES AND APPLICATIONS**

**Effective business professionals demonstrate advanced knowledge and skills for using mobile devices, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Use the telephone feature of a mobile device (e.g., #tag, response pad).
2. Install software programs and/or applications (word processor, spreadsheet, electronic slide show presentation, e-reader, etc.) on a mobile device.
3. Manage multimedia elements (digital movies, pictures, graphics, music, etc.) on a mobile device.
4. Research emerging technologies that expand the capabilities and functionalities of a mobile device.

## **M. USING DIGITAL IMAGES, SOUND, AND VIDEO**

**Effective business professionals demonstrate appropriate knowledge and skills for using audio, graphics, and video hardware and software, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Differentiate various audio, image, sound, and video file extensions (e.g., midi, mp3, wav, jpeg, vid).
2. Use scanner applications.
3. Scan images.
4. Acquire a digital image from a scanner.
5. Save scanned images in various file formats.
6. Discuss pixels, rasters, vectors, and resolution.
7. Manipulate scanned images.
8. Insert scanned images into applications.
9. Identify the basic components and functions of a digital input device.
10. Create digital photographs.
11. Import digital images from a digital camera or mobile device.
12. Insert digital images into an application.

13. Create a digital movie.
14. Download video from a digital video camera onto a computer's drive or storage device.
15. Insert video into an application.
16. Create audio narrations, voice-overs, or podcasts.
17. Create and edit a digital sound file.
18. Demonstrate proficiency in the use of audio applications.

## **N. USING IPADS, TABLET PCS, AND GRAPHING DEVICES**

**Effective business professionals demonstrate appropriate knowledge and skills for using personal devices and related software, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Identify terminology associated with new and emerging technologies (e.g., electronic whiteboard, graphics tablet, iPad, tablet PC, multi-touch screen device).
2. Adjust settings on an iPad, tablet PC, or graphing device.
3. Use a stylus to tap, double-tap, and tap and drag text or objects.
4. Use the art feature to create drawings.
5. Create a 2D animation model using Scratch/Alice.
6. Create a 3D animation model using Sketch Up.
7. Insert drawings into an application.
8. Change options and settings in the input panel.
9. Move converted handwritten text by using the "lasso" function.
10. Erase writing using a circle, "swish," or "scribble."
11. Correct spacing errors.
12. Use the input panel to cut, copy, and paste.
13. Use features to enter text and symbols.

## **O. USING PRESENTATIONS TO COMMUNICATE**

**Effective business professionals demonstrate appropriate knowledge and skills for creating effective presentations, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Use a presentation software interface (e.g., Prezi, Movie Maker, iMovie).
2. Apply message and purpose to a presentation.
3. Apply audience and impact to a presentation.
4. Plan for readability while creating a presentation.
5. Add graphics to presentation.
6. Insert themes, textures, and color schemes to a presentation.
7. Add visual appeal and explore the impact of color choices on presentations.

## **P. DESKTOP PUBLISHING**

**Effective business professionals demonstrate appropriate desktop publishing knowledge and skills, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Create a flyer using Microsoft Publisher.
2. Add, move, and resize images.
3. Apply new color, font, and background schemes.
4. Find and manipulate clip art.
5. Create and edit text boxes, shapes, and shadows.
6. Create business cards.
7. Create certificates.
8. Use word art (e.g., Wordle, Tagxedo).

## **Q. APPS AND GADGETS**

**Effective business professionals demonstrate appropriate webpage design knowledge and skills, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Create a Web site using Wix or Google Sites.
2. Create a Web page.
3. Title the Web page.
4. Name the Web page.
5. Save the Web page.
6. Create Web pages and a site map (site index) that maintain the planned Web site hierarchy, following a flowchart and storyboards.
7. Add text to a Web page.
8. Insert images on a Web page.
9. Add a calendar to the Web page.
10. Add a map gadget to the Web page.
11. Apply alternative text on a Web page.
12. Link Web content using hyperlinks, e-mail links, and named anchors.
13. Insert rich media such as video, sound, and animation.

## **R. COLLABORATION SKILLS**

**Effective business professionals demonstrate effective collaborative skills, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Discuss advantages and disadvantages of video conferencing.
2. Interact with other students using video conferencing (e.g., Skype, FaceTime).
3. Collaborate with students in other classes, states, and countries on real-world issues

## **S. PROJECT-BASED LEARNING: USING DIGITAL TECHNOLOGY**

**Effective business professionals demonstrate appropriate skills for using digital technology, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Complete problem-based projects throughout the course, incorporating digital technologies-related skills acquired.

## **T. QR AND BAR CODES (OPTIONAL)**

**Effective business professionals demonstrate knowledge and use of QR and bar codes, as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Explore types of bar and QR coding.
2. Explain the purpose for using codes to identify data.
3. Create and use QR and bar codes.
4. Use a QR code and URL shorteners.
5. Participate in a QR or bar code project (project-based).

## **U. CAREERS**

**Effective business professionals demonstrate appropriate career-ready skills as needed in their role. The following accountability criteria are considered essential for students in any Business program of study.**

1. Research careers in digital technologies.
2. Research education and training requirements for a particular career based on the research.
3. Explain the role of portfolios.
4. Create a résumé or biographical narrative to include in the e-portfolio.
5. Assemble and present an e-portfolio including a variety of projects produced in the course.

[Course Materials and Supplies](#)

[Course Academic Standards and Indicators](#)