Course Information

Catalog Description: This course addresses the capabilities and limitations of computer hardware and software, and social implications of computer technology. Students will explore a variety of applications and software.

Prerequisite(s): None

Corequisite(s): None

Credits: 3

Hours: 2 lecture and 2 lab

Required Text(s):

Supplemental Materials:

Instructor Information

Instructor's Name:

Contact Information:

Office Hours:

Program Goals

1. Demonstrate foundational knowledge of computer systems, including their components, functions, and applications.
2. Apply fundamental technology skills to solve problems and complete tasks in various computing environments.
3. Apply programming principles to solve problems using modern development tools.
4. Analyze and manage data communications and networking systems.

5. Apply critical thinking and data analysis techniques to solve computational problems and make informed decisions.
6. Design and develop interactive web content and apps using modern programming languages and development tools

Class Core Competencies

The following core competencies are embedded in this curriculum:

- Communicate effectively in both speech and writing
- Apply appropriate mathematical and statistical concepts and operations to interpret data to solve problems
- Use computer systems or other appropriate forms of technology to achieve educational and personal goals
- Address an information need by locating, evaluation and effectively using information.

Class Learning Assessment

Student Learning Outcomes	Suggested Means of Assessment
Define basic terminology (hardware, software, internet, networking, etc.) as it relates to a home, office, and/or business environments.	Quizzes (matching, mc, fill-in)
By exploring its history and evolution, describe the social and economic impact of computers and technology on a personal and global scale.	Research, writing and/or presentation assignment
Explain the functions of essential computer hardware components.	Quizzes (matching, mc, fill-in, hands-on), lab assignments
Utilize system and application software to accomplish tasks.	Lab assignments, exam (written/hands-on)

Student Learning Outcomes	Suggested Means of Assessment
Apply critical-thinking skills to retrieve, organize, analyze, and evaluate data/information through technological means.	Lab assignments, exam (written/hands-on)
Collaborate and share information using technology.	Research, writing and/or presentation assignment
Describe safe, secure, ethical, and legal use of technology.	Research, writing and/or presentation assignment
Describe techniques to acquire and upgrade technology skills as the level of computing evolves.	Quizzes (matching, mc, fill-in, hands-on), lab assignments

Grading System

Letter Grade	Percentage Range
A	90 to 100 percent
B Plus (B+)	87 to 89.9 percent
B	80 to 86.9 percent
C Plus (C+)	77 to 79.9 percent
C	70 to 76.9 percent
D	60 to 69.9 percent
F	Below 60 percent

College Information

Disability Services
Disability Services Webpage

Statement and Policy on Cheating, Plagiarism, and Academic Conduct
Academic Conduct Policy (Policy 304) [PDF]

Students are required to perform all the work specified by the instructor and are responsible for the content and integrity of all academic work submitted. A violation of academic integrity will occur if a student: (1) knowingly represents work of others as one's own, (2) uses or obtains unauthorized assistance in any academic work, (3) gives

fraudulent assistance to another student, or (4) furnishes false information or other misuse of college documents.

Unauthorized use of Artificial Intelligence (AI) is prohibited unless the instructor explicitly permits it in the syllabus or assignments. If tools such as ChatGPT are permitted by an instructor to be used for an assignment, they should be used with caution and with proper citation. In all such cases, you may only use the specific tools identified as acceptable and you must adhere to the College's standards for attribution, validation, and transparency.

In cases of suspected violation of academic integrity, the incident is to be reported to the Office of Academics. A student found guilty of violating the rule of academic integrity by the Vice President of Academics will be considered to have failed in personal obligation to the College; such failure will be subject to disciplinary action by the College. Unless otherwise notified, the instructor will allow students who are pending disciplinary action to attend class.

Tutoring and Testing at the Instructional Support Center (ISC)

- Instructional Support Center (ISC) Webpage

WCCC Library Services

- WCCC Library Website

Citation Styles and Formatting

Work submitted for any Warren County Community College course must conform to the required formatting and citation style that are specified by the instructor. The Library and Instructional Support Center can assist students with formatting and citations for assignments and papers.

WCCC Attendance Expectations

The College expects students to attend and participate in all classes. This involves sharing discussions and lectures in class, as well as interacting with other students. Grades are based on the quality of work students complete in meeting the requirements for a particular course, as stated in the course syllabus and catalog description. Attendance, among other factors, may be an additional criterion for assigning grades. Students should realize that they are responsible for all class meetings and that work missed because of absences may affect their grades. Attendance in online classes is determined by the completion of assignments/ tests. Students who have not completed

any assignments or tests will be considered non-attending and receive an NF grade in online classes.

Class Attendance Expectations

Topical Outline

A. Technology
   - Digital revolution, innovation and evolution, data processing, personal computing, network computing, cloud computing, ubiquitous computing, social media, gaming

B. Digital Basics
   - Data representation basics, binary, bits and bytes, hexadecimal compression, bitmap (Raster) graphics & editing, vector graphics creation & tools, 3D graphics, digital video

C. Computer Hardware (Digital Devices)
   - Computing history, input/output, processing, memory, storage, evaluating systems, needs analysis

D. Networking
   - Home network configurations, business architectures, protocols, wired and wireless networks, mobile devices

E. Internet
   - Internet history & development, internet access

F. Web
   - Web browsers, technology, protocols, ethical concerns web page design & development - HTML, CSS, and JavaScript coding

G. Programming
   - Programming languages, Python programming, application software office software, graphics software, web-based software, audio/video editing, database management, system software operating systems, file management, utilities, boot process

H. Security
   - Security concerns, viruses, malware, privacy, ethical concerns

Grading Methods

Assignment	Points/Percentage

Class Itinerary

Week / Unit	Topic	Readings/Assignments