**BARTON COMMUNITY COLLEGE**

**COURSE SYLLABUS**

# **GENERAL COURSE INFORMATION**

Course Number: BSTC 1001

Course Title: Introduction to Computers

Credit Hours: 3

Prerequisites: None

Division/Discipline: Workforce Training and Community Education

Course Description: This is a computer literacy course designed to introduce students to what a computer is and how computers can be used. Topics covered include a brief historical survey of computers, components of computer hardware, applications and systems software, survey of programming languages, computer systems design and analysis, problem-solving capabilities of a computer and the impact of computer technology on society. Students will also gain experience using microcomputers and packaged software such as word processing, spreadsheets, database management, graphics and telecommunications.

# **INSTRUCTOR INFORMATION**

# **COLLEGE POLICIES**

## Students and faculty of Barton Community College constitute a special community engaged in the process of education. The College assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

## Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism. Information about academic integrity is located in the Student Handbook.

## The College reserves the right to suspend a student for conduct that is determined to be detrimental to the College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy & Procedure Manual. (Most up-to-date documents are available on the College webpage.)

## Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is to notify Student Support Services via email at disabilityservices@bartonccc.edu.

# **COURSE AS VIEWED IN THE TOTAL CURRICULUM**

This course is designed to introduce students to the field of business technologies. The course will cover the historical background of the computer industry – highlighting the contributions of certain pioneers in hardware and software development. Besides taking a look back at the development of the computer and the effect it has had on our society, the student will also study the modern computer, its characteristics and its supporting software and hardware.

Please contact instructor for transferability. The transferability of all college courses will vary among institutions, and perhaps even among departments, colleges, or programs within an institution. Institutional requirements may also change without prior notification. Students are responsible to obtain relevant information from intended transfer institutions to insure that the courses the student enrolls in are the most appropriate set of courses for the transfer program.

# **ASSESSMENT OF STUDENT LEARNING**

Barton Community College is committed to the assessment of student learning and to quality education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

A.Teach the fundamentals of computers and Introduce today’s technologies

1. Explain the relationship between data and information
2. Define and explain various input options
3. Differentiate the web from the Internet
4. Briefly describe digital security risks
5. Differentiate between an operating system and applications
6. Differentiate between wired and wireless network technologies
7. Discuss how society uses technology
8. Identify technology used by home users, small/home office users, mobile users, power users, and enterprise users

B. Introduce students to the historical development of the Internet and how briefly explain how the Internet works

1. Discuss the evolution of the Internet
2. Explain the difference between the Internet and the World Wide Web
3. Describe various broadband Internet connections
4. Describe the purpose of an IP address and its relationship to a domain name
5. Identify the components of a web address
6. Describe ways to compose effective search text
7. Explain benefits and risks of using online social networks
8. Describe the various uses and types of websites
9. Explain how the web uses graphics, animation audio, video, and virtual reality
10. Explain how email, instant messaging, chat rooms, online discussions, VoIP, and FTP work
11. Identify the rules of netiquette

C. Review mobile devices and why they are essential components in business and society in general

1. Differentiate among laptops, tablets, desktops and servers
2. Describe the purpose and uses of smartphone, digital cameras, portable and digital media players, e-book readers, wearable devices and game devices.
3. Differentiate among POS terminals, ATMs, and self-service kiosks.
4. Describe cloud computing and identify its uses
5. Identify the uses of embedded computers
6. Differentiate a port from a connector and identify various ports and connectors
7. Differentiate among Bluetooth, Wi-Fi, and NFC wireless device connections.
8. Identify safeguards against hardware theft and vandalism and hardware failure
9. Discuss ways to prevent health-related injuries cause from technology

D. Teach the fundamentals of computer programs and software

1. Identify the general categories of programs and apps
2. Describe how operating systems interact with applications and hardware
3. Discuss different ways you can acquire programs and apps
4. Identify the key components of applications software: word processing, presentation, spreadsheet, database
5. Identify the key features of graphics and media applications: computer-aided design, desktop publishing, photo editing and web authoring
6. Identify the purpose of software used in communications
7. Identify the key features of file, disk and system management tools: file manager, search image viewer, uninstaller, disk cleanup, disk defragmenter, file compression, PC maintenance, and restore and backup

E. Introduce digital security, ethics and privacy as it relates to computers

1. Define the term digital security risk, and briefly describe the types of cybercrimes
2. Describe various types of Internet and network attacks: malware, botnets, and spoofing and identify ways to safeguard against these attacks
3. Discuss techniques to prevent unauthorized computer access and use including access controls, user names, passwords, possessed objects and biometric devices
4. Explain why software manufacturers protect against software piracy
5. Discuss how encryption, digital signatures and digital certificates work
6. Identify safeguards against hardware theft, vandalism and failure
7. Identify risks and safeguards associated with wireless communications
8. Recognize issues related to information accuracy, intellectual property rights, codes of conduct and green computing
9. Discuss issues surrounding information privacy: cookies, phishing, spyware and adware, social engineering, privacy laws, employee monitoring and content filtering

F. Recognize and introduce the components of a various computers and mobile devices

1. Describe the components of a processor, and the four steps in a machine cycle
2. Identify characteristics of various personal computer processors on the market today
3. Explain the advantages and services of cloud computing
4. Explain how program application instructions transfer in and out of memory
5. Differentiate among the various types of memory: RAM, cache, ROM, flash memory, and CMOS
6. Describe the purpose of adapter cards and USB adapters
7. Describe how to care for computers and mobile devices

G. Introduce the various Input and Output devices for computers and mobile devices

1. Describe the characteristics of various input devices: keyboard, mouse, touchpad, trackball, touchscreen, stylus, digital pen, scanners, RFID readers and graphics tablet.
2. Identify the types of output devices: displays, printers, speakers, headphones, data projectors, and interactive whiteboards
3. Identify various assistive technology input and output methods

H. Give students a understanding of digital storage

1. Differentiate between storage and memory
2. Describe the characteristics of: internal hard disks, solid-state drives, and external hard drives
3. Differentiate among various types of memory cards and USB flash drives
4. Describe the characteristics of and differentiate among types of optical discs
5. Identify uses of magnetic stripe cards, smart cards, RFID tags, and NFC tags

I. Provide students an understanding operating systems

1. Explain the purpose of an operating system
2. Describe the start-up process and shutdown options on computers
3. Explain how an operating system provides a user interface
4. Describe how an operating system enables users to configure devices, establish an Internet connection and monitor performance
5. Identify file management tools and other tools included with an operating system
6. Explain how an operating system enables users to control a network or administer security
7. Summarize the features and uses of several mobile operating systems: Google Android, Apple iOS, and Windows Phone

# **INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS**

# **TEXTBOOKS AND OTHER REQUIRED MATERIALS**

# **REFERENCES**

# **METHODS OF INSTRUCTION AND EVALUATION**

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# **ATTENDANCE REQUIREMENTS**

# **COURSE OUTLINE**