

HOME SYSTEMS TECHNOLOGY
NEW NAME: HOME SMART SYSTEMS TECHNOLOGY (Effective 2022-23)
ACTIVITY/COURSE CODES: 5330

COURSE DESCRIPTION: Home Smart Systems Technology is a course that prepares students for careers in designing, installing, and troubleshooting integrated smart home systems including environmental, security and surveillance, audio and video, and communications, in the modern home.

OBJECTIVE: Given the necessary equipment, supplies, and facilities, the student will complete all of the following core standards successfully.

CREDIT: 1 (120 hours)

REQUIRED PREREQUISITE: Electricity 1-3, or Electronics Technology 1-3

RECOMMENDED GRADE LEVEL: 10-12

COMPUTER ACCESS REQUIRED: 1 Computer per student with Internet access

RECOMMENDED MAXIMUM ENROLLMENT: 20-24

RESOURCES: [Instructional Materials](#)

A. STUDENT ORGANIZATIONS

Proficient 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.

B. TECHNOLOGY KNOWLEDGE

Proficient professionals know the academic subject matter, including the ethical use of technology 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; cyberbullying; illegal downloading; 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.

C. PERSONAL QUALITIES AND EMPLOYABILITY SKILLS

Proficient 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.

D. PROFESSIONAL KNOWLEDGE

Proficient 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.

E. SECURITY AND SURVEILLANCE SYSTEMS

Proficient home systems technicians design, install, and troubleshoot effective security and surveillance systems as needed in their role. The following accountability criteria are considered essential for students in the Manufacturing program of study.

1. Analyze the role and purpose of security and surveillance systems.
2. Identify devices used for security and surveillance systems.
3. Describe a UPS used for power outages.
4. Describe the uses of video surveillance and monitoring systems.
5. Identify the components and uses of a Wi-Fi network.
6. Describe the control and communications of security and surveillance systems.
7. Design, install, and troubleshoot a security and surveillance system.

F. AUDIO/VIDEO SYSTEMS

Proficient home systems technicians design, install, and troubleshoot effective audio and video systems as needed in their role. The following accountability criteria are considered essential for students in the Manufacturing program of study.

1. Analyze the role and purpose of audio and video systems.
2. Identify and describe the components of an audio and video system.
3. Identify, assemble, and install cabling and connectors for an audio and video system.
4. Describe the characteristics of analog and digital video signals.
5. Design, install, and troubleshoot an entertainment system.

G. HOME CONTROL SYSTEMS

Proficient home systems technicians demonstrate design, install, and troubleshoot effective home control systems as needed in their role. The following accountability criteria are considered essential for students in the Manufacturing program of study.

1. Analyze the role and purpose of home control systems.
2. Identify and install devices used for environmental controls.
3. Identify and install access controls.
4. Identify and install lighting controls.
5. Design, install, and troubleshoot a home control system.

H. TELECOMMUNICATIONS SYSTEMS

Proficient home systems technicians demonstrate design, install, and troubleshoot effective telecommunication systems as needed in their role. The following accountability criteria are considered essential for students in the Manufacturing program of study.

1. Analyze the role and purpose of phone and VoIP systems.
2. Identify and install devices used for phone and VoIP systems.
3. Design, install, and troubleshoot a telecommunications system.

[Course Materials and Resources](#)

[Academic Standards and Indicators](#)