



Western Technical College

10154103 IT Exploration

Course Outcome Summary

Course Information

Description	Students explore the Information Technology (IT) field and the various career options available to them. Customer service skills, ethics in the computer industry, servant leadership, teamwork, time management, and stress management will be covered. This course is where the student will begin to design and create their program portfolio.
Career Cluster	Information Technology
Instructional Level	Associate Degree Courses
Total Credits	3
Total Hours	63

Textbooks

No textbook required.

Learner Supplies

Canakit Raspberry Pi 4 Complete Starter Kit - 1 GB - 32 GB Edition. **Vendor:** Campus Shop. Required.

Success Abilities

1. Cultivate Passion: Expand a Growth-Mindset
2. Cultivate Passion: Increase Self-Awareness
3. Refine Professionalism: Act Ethically
4. Refine Professionalism: Practice Effective Communication

Experiential Learning

1. Community-Based Learning Service Hours: a key learning experience of this course is connecting course work while helping a community partner. Learn more about civic responsibility and enhance your community.

2. Work-Based Learning: this course applies your learning to your desired profession by working in industry placements such as internships, practicums, clinicals, or co-ops.

Program Outcomes

1. Manage information technology hardware.
2. Manage software.
3. Provide end user support.
4. Demonstrate customer service skills as an IT Professional.

Course Competencies

1. Explore the profession of Information Technology.

Assessment Strategies

- 1.1. Project
- 1.2. Written Product

Criteria

You will know you are successful when:

- 1.1. you interview a computer professional.
- 1.2. you relate virtual site visit observations to personal job goals.
- 1.3. you link your strengths inventory to personal job goals.
- 1.4. you explain key characteristics of the IT professional within an organization.
- 1.5. you assess personal career goals to ensure you are enrolled in the correct IT program.
- 1.6. you develop a career plan.

Learning Objectives

- 1.a. Develop questions to use for interviewing an IT professional.
- 1.b. Compare roles of computer professionals.
- 1.c. Describe IT departments and job potential.
- 1.d. Explore Information Technology (IT) programs offered at Western.
- 1.e. Review Internet career job websites.

2. Examine computer hardware.

Assessment Strategies

- 2.1. Project
- 2.2. Written Product

Criteria

You will know you are successful when

- 2.1. you assemble the Raspberry Pi properly.
- 2.2. you identify key hardware components and their purposes.
- 2.3. you explain technology trends in the industry.
- 2.4. you provide an explanation of binary code.
- 2.5. you reflect upon your strengths in comparison to the role of a hardware professional.

Learning Objectives

- 2.a. Identify computer components and its purpose.
- 2.b. Compare different types of computers.
- 2.c. Examine Moore's Law.
- 2.d. Examine binary numbers.
- 2.e. Differentiate responsibilities within each role of computer professionals.

3. Explore computer networking.

Assessment Strategies

- 3.1. Project

3.2. Written Product

Criteria

You will know you are successful when

- 3.1. you install and configure your Raspberry Pi on a LAN.
- 3.2. you install and configure VNC Viewer on the Raspberry Pi .
- 3.3. you install and configure a network using a network simulation tool.
- 3.4. you explain network technology trends in the industry.
- 3.5. you identify common computer security threats.
- 3.6. you reflect upon your strengths in comparison to the role of a networking professional.

Learning Objectives

- 3.a. Explore the history of computer networking.
- 3.b. Describe how a LAN works.
- 3.c. Describe how the Internet works.
- 3.d. Explore common networking commands.
- 3.e. Examine computer security threats.
- 3.f. Differentiate responsibilities within each role of computer professionals.

4. Explore software and systems.

Assessment Strategies

- 4.1. Project
- 4.2. Written Product

Criteria

You will know you are successful when

- 4.1. you log in and navigate your Office 365 account to find and use Microsoft software.
- 4.2. you log in and navigate Blackboard.
- 4.3. you log in and navigate Teams.
- 4.4. you install and configure software on your Raspberry Pi.
- 4.5. you explain software development life cycle.
- 4.6. you classify software.
- 4.7. you explain the purpose of software applications.
- 4.8. you reflect upon your strengths in comparison to the role of software systems professional.

Learning Objectives

- 4.a. Classify software.
- 4.b. Explore software development life cycle.
- 4.c. Describe e-Commerce systems.
- 4.d. Describe enterprise applications.
- 4.e. Explore Database Management systems
- 4.f. Explore office productivity software systems.
- 4.g. Differentiate responsibilities within each role of computer professionals.

5. Examine computer programming.

Assessment Strategies

- 5.1. Project
- 5.2. Demonstration
- 5.3. Written Product

Criteria

You will know you are successful when

- 5.1. you describe programming languages and their purposes.
- 5.2. you navigate to the command line on your Raspberry Pi.
- 5.3. you demonstrate key BASH Commands in the terminal using your Raspberry Pi.
- 5.4. you demonstrate file system commands in the terminal using your Raspberry Pi.
- 5.5. you navigate directory paths in the terminal using your Raspberry Pi.
- 5.6. you create a web document using HTML tags on your Raspberry Pi.
- 5.7. you reflect upon your strengths in comparison to the role of programming professional.

Learning Objectives

- 5.a. Explore programming languages and its purpose.
- 5.b. Explore Linux BASH Commands
- 5.c. Investigate file systems paths.
- 5.d. Examine HTML documents.
- 5.e. Explore key HTML tags.
- 5.f. Differentiate responsibilities within each role of computer professionals.

6. Examine cloud computing.

Assessment Strategies

- 6.1. Project: Google Site
- 6.2. Written Product

Criteria

You will know you are successful when

- 6.1. you explain cloud computing.
- 6.2. you compare the advantages and limitations of cloud computing.
- 6.3. you describe three major cloud computing service models.
- 6.4. you create a Google Site that will house your professional e-Portfolio.
- 6.5. you reflect upon your strengths in comparison to the role of cloud computing professional.

Learning Objectives

- 6.a. Describe cloud computing.
- 6.b. Identify advantages and limitations of cloud computing.
- 6.c. Compare cloud computing service models.
- 6.d. Investigate cloud computing vendors.
- 6.e. Differentiate responsibilities within each role of computer professionals.

7. Project a professional image.

Assessment Strategies

- 7.1. Class participation
- 7.2. Observation
- 7.3. Project
- 7.4. Written Product

Criteria

You will know you are successful when

- 7.1. you identify characteristics of a growth mindset.
- 7.2. you explain the difference between standard business and business casual dress codes.
- 7.3. you practice grooming and hygiene.
- 7.4. you identify professional online persona practices.
- 7.5. you demonstrate dependability and reliability.
- 7.6. you create positive relationships with peers and instructors.
- 7.7. you utilize proper business etiquette when communicating.

Learning Objectives

- 7.a. Recognize professional appearance.
- 7.b. Demonstrate a growth mindset.
- 7.c. Identify your customer.
- 7.d. Provide professional verbal and written communication.
- 7.e. Practice active listening skills.
- 7.f. Demonstrate an awareness of non-verbal communication.

8. Apply positive work ethics.

Assessment Strategies

- 8.1. Demonstration
- 8.2. Project
- 8.3. Written Product

Criteria

You will know you are successful when

- 8.1. you identify common ethical issues that can arise in the IT profession.
- 8.2. you describe characteristics of an ethical IT professional.
- 8.3. you demonstrate ethical behavior and personal accountability in the classroom by actively participating in class activities.
- 8.4. you demonstrate dependability and reliability by completing and submitting assignments on time.
- 8.5. you explain ethical issues that center upon sustainability.

Learning Objectives

- 8.a. Examine the concept of work ethics.
- 8.b. Explore key ethical issues that can arise in IT.
- 8.c. Examine characteristics of personal accountability.
- 8.d. Investigate ethical issues centered upon sustainability.

9. Practice working in an effective team.

Assessment Strategies

- 9.1. Demonstration
- 9.2. Participation in team meeting
- 9.3. Project
- 9.4. Written Product

Criteria

You will know you are successful when

- 9.1. you identify characteristics of a high performance team.
- 9.2. you describe benefits of teams.
- 9.3. you explain roles and responsibilities of team members.
- 9.4. you describe the stages of team development.
- 9.5. you construct a meeting agenda.
- 9.6. you construct meeting minutes.
- 9.7. you develop a team project using the Raspberry Pi.
- 9.8. you describe the characteristics of a servant leader.
- 9.9. you explain how servant leadership characteristics can benefit a team.

Learning Objectives

- 9.a. Examine benefits and challenges of working in groups.
- 9.b. Determine factors needed to build and maintain a highly effective work team.
- 9.c. Explore team roles and responsibilities for each stage of team development.
- 9.d. Organize a team meeting.
- 9.e. Explore the characteristics of a servant leader.
- 9.f. Identify reasons why the servant leadership model works well in teams.
- 9.g. Practice servant leadership within a team.

10. Investigate time management techniques.

Assessment Strategies

- 10.1. Project
- 10.2. Written Product

Criteria

You will know you are successful when

- 10.1. you identify time-wasting activities.
- 10.2. you document personal time management goals.
- 10.3. you identify stress causing situations.
- 10.4. you describe coping strategies.
- 10.5. you create a strategy plan for effective use of time and reducing stress.

Learning Objectives

- 10.a. Identify time-wasting activities.
- 10.b. Identify sources of stress.

- 10.c. Examine time management concepts.
- 10.d. Explore healthy stress management techniques.
- 10.e. Prepare a time management plan.
- 10.f. Examine how a time management plan can help reduce stress.

11. Develop an Information Technology professional e-portfolio.

Assessment Strategies

- 11.1. e-Portfolio Project
- 11.2. Written Product

Criteria

You will know you are successful when

- 11.1. you determine the layout and design for your e-portfolio.
- 11.2. you write a personal mission statement.
- 11.3. you write a statement of originality and confidentiality.
- 11.4. you write a resume.
- 11.5. you verify individuals to serve as references.
- 11.6. you select artifacts for e-portfolio.

Learning Objectives

- 11.a. Analyze e-portfolio examples.
- 11.b. Examine the purpose of a personal mission statement.
- 11.c. Explore resume styles and formats.
- 11.d. Identify individuals for your personal reference list based upon current industry standards.
- 11.e. Identify personal artifacts: recognitions, achievements, and certificates.