



Utah System of Higher Education
Collision Repair Technology
FY2023 / 34 Credits (1020 Clock-Hours)

Collision Repair Technology			
Institutions: Bridgerland, Dixie, Salt Lake			
<i>Certificate of Program Completion (Catalog Year: 2023, Required Credits/Clock-Hours: 34/1020)</i>			
Core (34 Credits/1020 Clock-Hours)		Credits	Clock-Hours
TECR 1010	Introduction to Collision Repair and Safety	1	30
TECR 1020	Collision Basic Structural Repair	4	120
TECR 1030	Collision Basic Non-Structural Repair	4	120
TECR 1040	Collision Surface Preparation I	4	120
TECR 1050	Collision Basic Refinishing	4	120
TECR 1060	Collision Repair Shop Operations & Career Success	1	30
TECR 1070	Collision Surface Preparation II	4	120
TECR 1080	Collision Advanced Refinishing	4	120
TECR 1090	Collision Plastic Welding and Adhesives	4	120
TECR 1100	Collision Repair Estimating, Damage Analysis, & Electronics	4	120



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PROGRAM DESCRIPTION

The Collision Repair Technology program prepares students for careers as body technicians, paint technicians, and or collision repair estimators. Courses provide instruction in the fundamentals of repairing vehicles from an automotive collision. Curriculum is aligned with the Inter-Industry Conference on Automotive Collision Repair (I-CAR). Upon successful completion of the program, students will be eligible for I-CAR Pro Level 1 testing through I-CAR's Professional Development Program.

Objectives:

- Operate common tools and equipment used in auto body repair, auto body painting, and collision repair estimating in a safe manner
- Demonstrate competency in structural and non-structural repair techniques including analysis and damage repair fundamentals with a variety of metals, plastics, glass, electrical, and mechanical parts
- Demonstrate competency in techniques involved in painting and refinishing including surface prep, spray gun equipment operation, paint mixing & matching, paint application, paint defects (causes and cures), and final detail
- Identify & demonstrate correct welding techniques for each specific auto body repair procedure
- Demonstrate proficiency in collision repair estimating, damage analysis, and electronics tools
- Certify in I-CAR Pro Level 1
- Practice professional and responsible behavior
- Use effective communication and critical-thinking skills to solve problems and implement solutions

COURSE DESCRIPTIONS

Introduction to Collision Repair and Safety

1 Credit/30 Clock-Hours

In the Introduction to Collision Repair and Safety course, students will be required to learn about the safety requirements and tools located within the shop and how to use safe practices when they enter the field. Students will learn from the SP-2 safety training course on-line curriculum, and they must complete it before entering the shop area to work. Students will also have to go through a stringent safety program called SP2. In this course they will know and understand the safety procedures as they apply within the lab areas working with shop tools as well as hazardous materials.

Objectives:

- Practice wearing appropriate personal protective equipment in the lab including safety glasses and the proper uniform.
- Complete the safety course and online SP2 training with a passing score.
- Demonstrate proper use of hand tools used in the Collision Repair Technology program.
- Demonstrate proper handling of hazardous materials.
- Complete the I-CAR Online Curriculum Training/PDP.

Collision Basic Structural Repair

4 Credits/120 Clock-Hours

In the Collision Basic Structural Repair course, students will learn the basic skills of how to be a steel structural technician. A steel structural technician restores vehicle dimensions and structural integrity to collision-damaged vehicles. He/she uses three-dimensional measuring and straightening equipment to diagnose and return damaged frame or unibody parts to manufacturer's specifications. Hand tools and power tools are used to remove or repair damaged parts, weld as needed, and properly install new parts. The Steel Structural Technician also works with a variety of metals and plastics, as well as glass, electrical, and mechanical parts. Students will understand the structural technician's duties and be able to perform them adequately.

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Objectives:

- Practice personal collision repair safety daily in all collision repair processes.
- Identify and show the uses of all hand and power tools used in the collision repair program.
- Effectively diagnose frame damage using the laser measuring system.
- Determine if a part needs to be repaired or replaced, and what is most cost effective.
- Read and decipher a computerized estimate for auto collision repair.
- Explain a "print out" of a laser measuring system's analysis.
- Demonstrate the set up and uses of a tram (Bar) gauge.

Collision Basic Non-Structural Repair

4 Credits/120 Clock-Hours

In the Collision Basic Non-Structural Repair course, students will learn the basic skills of how to be a non-structural technician. A Non-Structural Technician restores damaged exterior panels to their original integrity, function, and appearance. This technician uses hand tools and power tools to remove or repair damaged parts, weld as needed, and properly install new parts. He/she works with a variety of metals and plastics, as well as glass, electrical, and mechanical parts. Students will understand the non-structural technician's duties and be able to perform them adequately.

Objectives:

- Practice personal collision repair safety daily in all collision repair processes.
- Identify and show the uses of all hand and power tools used in the collision repair program.
- Effectively repair cosmetic damage on numerous vehicle substrates.
- Determine if a part needs to be repaired or replaced, and what is more cost effective.
- Read and decipher a computerized estimate for auto collision repair.

Collision Basic Refinishing

4 Credits/120 Clock-Hours

In the Collision Basic Refinishing course, students will be able to understand and implement the learned methods of basic panel preparation and refinishing. Students will learn the different types of undercoating including sealers and primers, their use, limitations, and application. Students will also learn skills with refinish products, their solid levels, coverage, use and maintenance of shop paint spray equipment, along with prevention and removal of refinishing processing defects.

Objectives:

- Practice refinishing safety and implement those skills when refinishing.
- Safely operate the paint mixing system and manage its features.
- Demonstrate how to properly tint toners for color matching.
- Explain vehicle substrates and address problems when painting them.
- Practice skills of painting techniques, color, and clear blending.
- Explain how numerous primers, sealers, and ground coats affect refinishing.
- Identify the different types of finishes, single stage, two, and three stage paint processes.
- Discuss the differences between solvent-based and water-based paints.
- Attend and participate in paint company demos, trainings, and painter certifications.

Collision Repair Shop Operations & Career Success

1 Credits/30 Clock-Hours

In the Collision Repair Shop Operations & Career Success course, students will participate in class instruction, lecture, discussion, and self-paced online coursework. This course teaches students the soft skills employers demand to help increase job retention, improve employee relations, and make their business stand out from the crowd.

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Objectives:

- Display responsible and professional behaviors for a work environment.
- Actively look for ways to identify market demands and meet customer or client needs.
- Demonstrate the ability to work effectively with others.
- Maintain open lines of communication with others and communicate effectively.
- Plan and prioritize work to manage time effectively and accomplish assigned tasks.
- Demonstrate the ability to apply critical-thinking skills to solve problems by generating, evaluating, and implementing solutions.
- Display the capability to adapt to new, different, or changing requirements.
- Select, use, and maintain tools and technology to facilitate work activities.

Collision Advanced Refinishing

4 Credits/120 Clock-Hours

In this Collision Advanced Refinishing course, students will be fully trained on the advanced methods of painting, using both solvent-base and water-base products. Students will also learn and understand how to do advanced painting techniques and problem-solving techniques to utilize when encountering painting problems.

Objectives:

- Fully disassemble, reassemble, and adjust all spray guns and equipment.
- Implement storage and disposal of all hazardous waste in lab area.
- Practice refinish safety when entering the lab area and refinishing.
- Demonstrate the importance of proper substrate preparation.
- Acknowledge and explain how surface preparation affects refinishing.
- Explain how and where surface preparation sanding grits are used.
- Discuss the skills in tri-stage painting processes.
- Demonstrate how to detail the inside and outside of a vehicle.
- Demonstrate how to cut, de nib, and polish vehicle panels.
- Demonstrate how to do two-tone painting techniques.

Collision Plastic Welding and Adhesives

4 Credits/120 Clock-Hours

In this Collision Plastic Welding and Adhesives course, students will learn how to identify different types/kinds of plastics and proceed through the plastic welding processes. Students will identify and study adhesives to learn how and where they are used in the industry. Students will learn the different application processes.

Objectives:

- Explain how various plastic vehicle parts are made.
- Discuss why plastics are used in vehicle construction.
- Demonstrate how to set up the plastic welding equipment.
- Operate the machine(s) used in plastic welding.
- Demonstrate repairing damaged automotive plastics.
- Identify different types of adhesives and their applications.
- Demonstrate how to prepare areas for adhesive uses.
- Demonstrate how to apply the adhesives to various areas of the vehicle.
- Explain how and why seam sealers are used on vehicles.
- Demonstrate how to prepare areas on a vehicle for seam sealing.
- Demonstrate how to apply seam sealers to various areas on a vehicle.

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- Explain how and why undercoating and corrosion protectants are used.
- Demonstrate how to prepare areas on a vehicle for undercoating and corrosion protectants.
- Demonstrate how to apply undercoating and corrosion protectants to areas on a vehicle.

Collision Repair Estimating, Damage Analysis, & Electronics

4 Credits/120 Clock-Hours

Students will learn how to correctly, effectively analyze damage to a vehicle and write computerized estimates corresponding to it. Students will be fully trained on a visual evaluation of the primary, secondary, and previous damages on a vehicle. After the damage is determined in an accident, students will then formulate a computerized estimate for the damaged vehicle. Students will learn and fully understand the estimator's, technician's, and refinisher's roles and expectations. Parts resourcing, insurance company roles, and customer relations will also be integrated within this course.

Objectives:

- Identify visual damage to a vehicle.
- Analyze damage to a vehicle.
- Discuss collision repair estimating and vehicle terminology.
- Explain how vehicle owners, insurance companies, and repair shops work together.
- Identify vehicle and industry terminology.
- Write a handwritten and computerized estimate for a damaged vehicle.
- Discuss the computerized estimating system and the estimator's role in the industry.
- Locate and read a vehicle's vin plate/trim tag as it pertains to estimating.
- Explain affected areas of damage to panels on a vehicle.
- Discuss the essentials of how vehicles are made and with what products.
- Explain the importance and processes of photo documentation.
- Demonstrate how to book out a vehicle for its actual cash value (ACV).



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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Information Technology & Cybersecurity			
Institutions: Bridgerland, Davis, Dixie, Ogden-Weber, Salt Lake, Snow, Tooele, Uintah Basin, USU-Eastern			
<i>Certificate of Program Completion (Catalog Year: 2023, 30 Credits/900 Clock-Hours Required, CIP: 11.0901)</i>			
Core (21 Credits/630 Clock-Hours)		Credits	Clock-Hours
TEIT 1200	A+ Core I	3	90
TEIT 1210	A+ Core II	3	90
TEIT 2100	Computer Networks	4	120
TEIT 1300	Linux Foundations	2	60
TEIT 2200	Security +	4	120
TEIT 1100	Introduction to Networking	1	30
TEIT 1400	Introduction to Cloud	2	60
TEIT 1500	Introduction to Scripting	1	30
TEIT 1050	Career & Workplace Relations	1	30
Electives (9 Credits/270 Clock-Hours)			
<i>Bridgerland Technical College</i>			
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 2140	Network Traffic Analysis	1	30
TEIT 1900	Service Desk Internship	2	90
TEIT 1550	Practical Python	3	90
TEIT 1040	Introduction to Virtualization	1	30
TEIT 2900	IT Externship	2	90
TEIT 2901	Special Applications	1-6	30-180
TEIT 1090	IT STEM	1-4	30-120
TEIT 2270	Cybersecurity Analysis	3	90
TEIT 2250	Ethical Hacking	3	90
TEIT 2300	Linux +	3	90
TEIT 2160	Routing and Switching	4	120
TEIT 2320	Hybrid Server Core	4	120
TEIT 2330	Hybrid Server Advanced	4	120
TEIT 1610	Microsoft Azure Fundamentals	2	60
<i>Davis Technical College</i>			
TEIT 1000	Information Technology Fundamentals	2	60
TEIT 1150	Cisco CCNA Introduction to Networks	3	90
TEIT 1160	Cisco CCNA Switching, Routing, and Wireless Essentials (SWRE)	3	90
TEIT 1600	Microsoft 365 Fundamentals	3	90
TEIT 1650	Remote Desktop Technologies	1	30
TEIT 1040	Introduction to Virtualization	1	30
TEIT 1640	Deploying the Modern Desktop	1	30
TEIT 1630	Microsoft Windows Server Administration Fundamentals	2	60
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30



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TEIT 1820	Certification Test Prep III	1	30
TEIT 1830	Certification Test Prep IV	1	30
TEIT 2350	CompTIA Project +	3	90
TEIT 2900	IT Externship	2	90
TEIT 2910	Special Projects I	1	30
TEIT 2920	Special Projects II	2	60
TEIT 2930	Special Projects III	3	90
Dixie Technical College			
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT 1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 2950	Final Project	3	90
Ogden-Weber Technical College			
TEIT 1000	Information Technology Fundamentals	2	60
TEIT 1040	Introduction to Virtualization	1	30
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 2140	Network Traffic Analysis	1	30
TEIT 2250	Ethical Hacking	3	90
TEIT 2270	Cybersecurity Analysis	3	90
TEIT 2300	Linux +	3	90
TEIT 2900	IT Externship	2	90
TEIT 2910	Special Projects I	1	30
TEIT 2920	Special Projects II	2	60
TEIT 2930	Special Projects III	3	90
TEIT 1290	Linux Computing with Raspberry Pi	2	60
TEIT 1940	Intermediate Service Desk	2	60
TEIT 1110	Introduction to Cybersecurity	1	30
Salt Lake Community College			
TEIT 1600	Microsoft 365 Fundamentals	3	90
TEIT 1610	Microsoft Azure Fundamentals	2	60
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT 2270	Cybersecurity Analysis	3	90
TEIT 1110	Introduction to Cybersecurity	1	30
Snow College			
CIS 1000	Orientation	1	30
CIS 1130	Networking Essentials	2	60
CIS 1500	Introduction to IOT	3	90
CIS 2310	Cybersecurity Essentials	3	90
Tooele Technical College			
TEIT 1800	Certification Test Prep I	1	30

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TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT 1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 1150	Cisco CCNA Introduction to Networks	3	90
TEIT 1160	Cisco CCNA Switching, Routing, and Wireless Essentials (SWRE)	3	90
TEIT 2150	Cisco CCNA Enterprise Networking, Security, and Automation (ENSA)	3	90
TEIT 2300	Linux +	3	90
TEIT 2250	Ethical Hacking	3	90
TEIT 2270	Cybersecurity Analysis	3	90
TEIT 2910	Special Projects I	1	30
TEIT 2920	Special Projects II	2	60
TEIT 2930	Special Projects III	3	90
TEIT 1610	Microsoft Azure Fundamentals	2	60
TEIT 1600	Microsoft 365 Fundamentals	3	90
TEIT 2320	Hybrid Server Core	4	120
TEIT 2330	Hybrid Server Advanced	4	120
Uintah Basin Technical College			
TEIT 1012	Introduction to Python	2	60
TEIT 1630	Microsoft Windows Server Administration Fundamentals	2	60
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT 1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 2106	Technical Installation	2	60
TEIT 2250	Ethical Hacking	3	90
TEIT 2350	CompTIA Project +	3	90
TEIT 2910	Special Projects I	1	30
TEIT 2920	Special Projects II	2	60
TEIT 1910	Telecommunications	2	60
Utah State University			
TEIT 1041	Introduction to Programming	3	90
TEIT 1091	Introduction to Mobile Application Development	3	90
TEIT 1310	Website Design	3	90
TEIT 1340	Digital Video Production	3	90
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 2300	Linux +	3	90
TEIT 2441	Photoshop	3	90
TEIT 2500	Web Business	3	90
TEBP 1200	Professionalism	3	90
TEBP 1650	Management Principles	2	60

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Information Technology & Cybersecurity

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PROGRAM DESCRIPTION

This program provides education and training in preparation for careers in Information Technology and Cybersecurity. Throughout the program, students apply classroom theory to computer hardware and software, mobile devices, operating systems, networking, security, cloud technology, and other technologies relevant to the industry. Students learn to develop, defend, and protect networks and information systems against cyber-attacks while implementing and managing hardware, operating systems, local and wide-area networks, computer forensics, vulnerability assessment, security compliance, and information assurance. Through a combination of simulations, hands-on labs and/or virtual labs, students apply techniques for technology deployment, support, maintenance and troubleshooting. This training prepares students to gain valuable industry recognized certifications including: CompTIA A+, Network+, and Security+. Additional certification opportunities may include Cisco Certified Network Associate (CCNA), Microsoft, Amazon Web Services (AWS), Linux, and more.

Objectives:

- Develop and demonstrate skills required for positions in Information Technology & Cybersecurity.
- Demonstrate knowledge, skills, and abilities aligning with standards for industry certifications.
- Install, configure, maintain, and troubleshoot common hardware and software.
- Install, configure, maintain, and troubleshoot operating systems.
- Design, implement, and manage scalable networks.
- Identify advanced security threats and implement best practices to mitigate risks.
- Demonstrate effective verbal and written communication using industry specific terminology.

COURSE DESCRIPTIONS

A+ Core I

3 Credit/90 Clock-Hours

A+ Core I prepares students to be successful computer technicians, capable of installing, maintaining, troubleshooting, optimizing, and securing desktop computers, laptops, mobile devices, and printers. This course aligns with objectives of the CompTIA A+ Core 1 certification exam.

Objectives:

- Install and configure computer hardware components and peripheral devices.
- Identify and configure basic networking components and protocols.
- Install and configure laptops and other mobile devices.
- Diagnose and troubleshoot device and network issues.
- Compare and contrast cloud computing concepts.
- Configure client-side virtualization.

A+ Core II

3 Credit/90 Clock-Hours

A+ Core II is a follow-up to A+ Core1 and provides further instruction on installation, configuration, maintenance, and security of various common operating systems and platforms. This course aligns with the objectives of the CompTIA A+ Core 2 certification exam.

Objectives:

- Install and Configure Windows, Mac, and Linux.
- Identify best practices for safety, environmental impacts, communication, and professionalism.
- Troubleshoot common operating system, malware, and security issues.
- Identify basic vulnerabilities and protect against threats.
- Install, configure, and maintain software in computers and mobile devices.

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Computer Networks

4 Credits/120 Clock-Hours

Computer Networks provides instruction on the installation, configuration, management, and troubleshooting of common components of modern computer networks. This course prepares candidates to support networks across multiple platforms and aligns with the objectives of the CompTIA Network+ certification exam.

Objectives:

- Demonstrate an understanding of core networking concepts and terminology.
- Install, configure, and verify the functionality of networking devices and components given multiple scenarios.
- Identify network security vulnerabilities and mitigations.
- Implement security for a basic network.
- Compare and contrast business continuity and disaster recovery concepts.
- Troubleshoot common network connectivity issues.

Linux Foundations

2 Credits/60 Clock-Hours

Linux Foundations focuses on the installation, configuration, and process management of a Linux workstation. Students explore shell programming, file system management, user accounts, access and permissions, and managing multiple concurrent processes to achieve higher utilization.

Objectives:

- Install and maintain a Linux workstation.
- Configure Linux from the GUI and command line.
- Configure file and access permissions.
- Perform maintenance tasks including user management, backup and restore, shut down, and reboot.

Security +

4 Credits/120 Clock-Hours

Security+ provides instruction on assessing the security posture of enterprise environments and implementing appropriate security solutions. Instruction is given to identify, analyze, and respond to events and incidents. This course aligns with the objectives of the CompTIA Security+ certification exam.

Objectives:

- Explain security functions and purposes as they relate to network devices.
- Identify and implement risk mitigation techniques and strategies.
- Distinguish and evaluate different network and physical security threats.
- Implement network intrusion detection and prevention technologies.
- Identify and execute appropriate cryptography measures.

Introduction to Networking

1 Credits/30 Clock-Hours

Introduction to Networking provides foundational-level instruction on the concepts, models, services, settings, protocols, topologies, and devices used in computer networks. Students also explore the Open Systems Interconnection (OSI) and Transmission Control Protocol/Internet Protocol (TCP/IP) models.

Objectives:

- Define common concepts and terms associated with computer networking.
- Identify and differentiate the purpose and function of common networking devices.

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- Identify and differentiate common networking ports, protocols and services.
- Identify components of the OSI and TCP/IP models.
- Compare and contrast network topologies and access methods.

Introduction to Cloud

2 Credits/60 Clock-Hours

Introduction to Cloud provides instruction on core cloud computing concepts, services, and solutions as well as foundational knowledge from a business value perspective of the benefits and considerations for cloud computing implementation. Included is an overview of popular cloud platforms.

Objectives:

- Define the value proposition of cloud computing.
- Identify core cloud concepts, services, solutions, and management tools.
- Demonstrate an understanding of cloud security considerations, features, and best practices.
- Describe cloud identity, governance, privacy, and compliance concepts and features.
- Compare and contrast cloud pricing models and identify cost management solutions.
- Define cloud deployment models, methods, and operations.

Introduction to Scripting

1 Credits/30 Clock-Hours

Introduction to Scripting provides instruction on basic scripting concepts. Students are introduced to scripting fundamentals to automate tasks that would otherwise be performed manually. Students explore the practical use and management of scripts to perform system administration functions.

Objectives:

- Demonstrate an understanding of the features of scripting languages.
- Implement critical thinking and problem-solving skills through practical exercises.
- Perform automation of systems tasks and functions.

Career & Workplace Relations

1 Credits/30 Clock-Hours

Career and Workplace Relations is designed to help students gain insight into how their skills and professionalism enhance relationships between management and coworkers. Instruction includes employment skills such as communication, critical thinking, professional etiquette, team dynamics and more.

Objectives:

- Identify personal and transferable skills, competencies and/or abilities.
- Create an industry specific resume, cover letter, thank you letter, reference list, and online presence.
- Demonstrate effective interviewing skills.
- Submit an application for an industry specific position.
- Demonstrate effective use of job search websites.



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NON-ALIGNED (ELECTIVE) COURSES

Bridgerland Technical College

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam



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Certification Test Prep V

1 Credit/30 Clock-Hours

Certification Test Prep V provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep VI

1 Credit/30 Clock-Hours

Certification Test Prep VI provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Network Traffic Analysis

1 Credit/30 Clock-Hours

This course provides instruction on the fundamental basics of network traffic analysis. This course will cover the process of recording, reviewing, and analyzing network traffic for performance, security and/or general network operations and management.

Objectives:

- Describe and evaluate network utilization
- Record, filter and analyze different types of network traffic
- Demonstrate use of network analysis tools
- Identify types of network connections

Service Desk Internship

2 Credits/90 Clock-Hours

This course provides instruction on customer support, technical documentation and advanced troubleshooting techniques in a service desk environment. Students will have opportunities to work directly with customers' personal equipment in a supervised environment. (Requires adviser approval).

Objectives:

- Demonstrate Advanced troubleshooting techniques and processes
- Document product, customer, and repair information in database
- Demonstrate how to find and research information to properly diagnose and repair personal computers



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Practical Python

3 Credits/90 Clock-Hours

Practical Python provides instruction on the fundamentals of Object-Oriented Programming in Python. It includes the creation of Python scripting from basic to intermediate as well as the debugging process of creating Python code.

Objectives:

- Demonstrate how to install Python
- Demonstrate a working knowledge of Python by writing a simple syntax
- Troubleshoot Python code problems

Introduction to Virtualization

1 Credit/30 Clock-Hours

Introduction to Virtualization explores what Virtualization is and the critical role it plays in IT. Learn how to install, configure, and maintain virtual machines as well as the availability, applications, and virtual appliances, including their role in Virtualization.

Objectives:

- Explore Virtualization and the benefits gained from a Virtual environment
- Demonstrate how to enable Virtualization on a host system.
- Install operating systems on Virtual machines
- Import/Export Virtual machines for use in different virtualization platforms
- Configure basic processing, memory, storage, and networking in a Virtual environment
- Demonstrate how to Copy, backup, and restore virtual machines

IT Externship

2 Credits/90 Clock-Hours

Students will have the opportunity to develop real-world work experiences using knowledge and skills they have obtained in the program. Students will gain practical application of classroom skills through actual work situations. IT projects will be assigned to the student by cooperative businesses. Students will receive objective feedback on their performance each month. Customized student learning objectives will be developed addressing the individual needs of the organization and career interests of each student by the cooperative business and the student.

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Demonstrate ability to work independently
- Demonstrate ability to receive constructive criticism
- Write cooperatively with faculty and agency to create personalized objectives to be accomplished during the internship

Special Applications

1-6 Credits/30-180 Clock-Hours

The Special Apps course accepts transfer credit from students who have obtained content mastery through a related IT course participation. Content mastery may be obtained from curricula or transcript. Credit will be determined through competency demonstration of hardware devices and/or software systems. (Requires advisor approval).

Objectives:

- Obtain competency credit for successful completion of related IT course(s)

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Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

- Demonstrate industry level content mastery of prior learning
- Create, design, and build skills necessary to be successful in the Information Technology career cluster

IT STEM

1-4 Credits/30-120 Clock-Hours

The IT STEM course accepts transfer credit from students who have obtained content mastery through IT STEM participation. Content mastery may be obtained from curricula. Credit will be determined through competency demonstration of hardware devices and/or software systems. (Requires advisor approval).

Objectives:

- Obtain competency credit for successful completion of IT STEM course(s)
- Demonstrate industry level content mastery of prior learning
- Create, design, and build skills necessary to be successful in the Information Technology career cluster

Cybersecurity Analysis

3 Credits/90 Clock-Hours

Cybersecurity Analysis teaches threat and vulnerability management and how to employ tools and methods to secure data and infrastructure and respond to security incidents. The CompTIA CySA+ objectives are covered and serves as a foundation for advanced security credentials.

Objectives:

- Implement appropriate tools and methods to perform a reconnaissance of a system or network
- Gather data and analyze the results of a reconnaissance
- Describe and implement techniques and procedures needed to secure an organization
- Classify threat data or activities for their impact on a security incident
- Manage incident response, recovery, and reporting

Ethical Hacking

3 Credits/90 Clock-Hours

Ethical Hacking teaches fundamental network attack strategies and countermeasures. Students learn to use various penetration testing tools to analyze network vulnerabilities and how to counter them and improve network security. This course aligns with the Certified Ethical Hacker (CEH) objectives.

Objectives:

- Perform: reconnaissance, scanning, and enumeration
- Demonstrate Access: Obtain login credentials, administrative access and escalate privileges, access by cracking
- Perform Attacks: Perform passive and active online attacks and infrastructure attacks
- Demonstrate Defense Techniques: Defend systems and devices, implement defensive systems, scan for vulnerabilities

Linux +

3 Credits/90 Clock-Hours

Linux + provides instructions on how to install, configure, manage, and maintain a Linux server. Topics include: SSH, VNC, Webmin, NIS and LDAP. Students learn to install, configure, and administer a Linux server. This course aligns with the CompTIA Linux + objectives.

Objectives:

- Configure the Linux file systems

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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

- Configure file sharing services
- Configure network services
- Demonstrate competency with Linux Administration Tools

Routing and Switching

4 Credits/120 Clock-Hours

Routing and Switching teaches knowledge and skills related to network fundamentals, network access, IP connectivity, IP services, security fundamentals, and the automation and programmability of Cisco devices. This course meets the objectives for the Cisco Certified Network Associate (CCNA) exam.

Objectives:

- Setup and configure a router and a switch (NAT, DHCP, DNS)
- Configure IP settings
- Configure OSPF routing, VLANs and spanning trees
- Configure router and switch security and access control list

Hybrid Server Core

4 Credits/120 Clock-Hours

The Hybrid Server Core course teaches configuring and managing Windows Server on-premises, hybrid, and Infrastructure as a Service platform workloads. Learn on-premises and hybrid solutions, such as identity, security, management, compute, networking, storage, monitoring, and disaster recovery. Microsoft AZ-800 Certification objectives are covered.

Objectives:

- Deploy and manage Active Directory Domain Services in on-premises and cloud environments
- Manage Windows Servers and workloads in a hybrid environment
- Manage virtual machines and containers
- Implement and manage an on-premises and hybrid networking infrastructure
- Manage storage and file services.

Hybrid Server Advanced

4 Credits/120 Clock-Hours

The Hybrid Server Advanced course focuses more on security, high availability, backup and recovery, troubleshooting, monitoring, and migration from on-premises to Azure. Microsoft AZ-801 certification objectives are covered.

Objectives:

- Manage Windows Servers and workloads in a hybrid environment
- Secure Windows Server on-premises and hybrid infrastructures
- Implement and manage Windows Server high availability
- Implement disaster recovery
- Migrate servers and workloads
- Monitor and troubleshoot Windows Server environments.

Microsoft Azure Fundamentals

2 Credits/60 Clock-Hours

The Microsoft Azure Fundamentals course is an introduction to the Microsoft Azure cloud platform and includes instruction on foundational cloud concepts, the Azure management portal, Azure architecture and services, Azure storage and workloads, security and privacy in Azure, as well as Azure resource



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deployment, service monitoring, pricing, and cost management. This course aligns with the objectives of the Microsoft AZ 900 Azure Fundamentals certification exam.

Objectives:

- Describe Azure cloud concepts, services, workloads, security and privacy
- Describe Azure core architectural components and services
- Describe Azure compute and networking services
- Describe Azure management and governance

Davis Technical College

Information Technology Fundamentals

2 Credits/60 Clock-Hours

This course provides an overview of the various career pathways related to working with computers. Throughout the class, students will be introduced to computers, including their history, hardware, operating systems, system support, programming languages, software, databases, networking, data storage, and system security. During this course, the student will perform essential IT tasks commonly performed by end-users and entry-level IT professionals. This course aligns with the objectives of the CompTIA ITF+ certification exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Cisco CCNA Introduction to Networks

3 Credits/90 Clock-Hours

CCNA Introduction to Networks curriculum introduces the architectures, models, protocols, and networking elements that connect users, devices, applications and data through the Internet and across modern computer networks. Learn to build simple local area networks (LANs) that integrate IP addressing schemes, configure foundational network security, and perform basic configurations for routers and switches.

Objectives:

- Build simple LANs, perform basic configurations for routers and switches, and implement IPv4 and IPv6 addressing schemes.
- Configure routers, switches, and end devices to provide access to local and remote network resources and to enable end-to-end connectivity between remote devices.
- Develop critical thinking and problem-solving skills using real equipment and Cisco Packet Tracer
- Configure and troubleshoot connectivity of a small network using security best practices

Cisco CCNA Switching, Routing, and Wireless Essentials (SWRE)

3 Credits/90 Clock-Hours

The Cisco CCNA Switching, Routing, and Wireless Essentials (SWRE) course focuses on switching technologies and router operations that support small-to-medium business networks and includes wireless local area network (WLAN) and security concepts. Students learn key switching and routing concepts. They can perform basic network configuration and troubleshooting, identify and mitigate local area network (LAN) security threats, and configure and secure a basic WLAN.



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FY2023 / 30 Credits (900 Clock-Hours)

Objectives:

- Utilizing routers, switches and wireless devices, configure and troubleshoot VLANs,
- Wireless LANs and Inter-VLAN routing
- Configure and troubleshoot redundancy on a switched network using STP and EtherChannel
- Develop critical thinking and problem-solving skills using real equipment and Cisco Packet Tracer
- Explain how to support available and reliable networks using dynamic addressing and first-hop redundancy protocols

Microsoft 365 Fundamentals

3 Credits/90 Clock-Hours

The Microsoft 365 Fundamentals course provides instruction on how Microsoft 365 solutions address common organizational technology challenges including productivity, collaboration, and communication. Topics include endpoint and application management, desktop virtualization, automated operating system deployment, Microsoft 365 licensing, deployment and migration assistance, and product support options. This course aligns with the objectives of the Microsoft MS 900 certification exam.

Objectives:

- Identify and describe cloud concepts
- Describe core Microsoft 365 services and solutions
- Describe security, compliance, privacy, and trust in Microsoft 365
- Compare and contrast Microsoft 365 licensing, pricing, and support option

Remote Desktop Technologies

1 Credit/30 Clock-Hours

The hybrid workplace model mixes in-office and remote work to offer flexibility and support to employees. The modern support desk requires specialists to be knowledgeable in the usage of third-party remote software, cloud-based collaboration and sharing, Firewalls, VPN client configuration, remote desktop tools, and the virtual desktop interface. This course runs students through several real-world scenarios and hands-on labs.

Objectives:

- Explain key applications and connectivity options of remote work environments.
- Perform analysis, diagnosis, and resolution of connectivity issues faced in a hybrid workforce environment.
- Identify the key security principles of various cloud infrastructures, apps, and storage choices.
- Compare and contrast Virtual workspaces, VDI, and Desktop as a Service (DaaS).
- Demonstrate professional, clear, and concise verbal and written communication.

Introduction to Virtualization

1 Credit/30 Clock-Hours

Introduction to Virtualization explores what Virtualization is and the critical role it plays in IT. Learn how to install, configure, and maintain virtual machines as well as the availability, applications, and virtual appliances, including their role in Virtualization.

Objectives:

- Explore Virtualization and the benefits gained from a Virtual environment
- Demonstrate how to enable Virtualization on a host system.
- Install operating systems on Virtual machines
- Import/Export Virtual machines for use in different virtualization platforms

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FY2023 / 30 Credits (900 Clock-Hours)

- Configure basic processing, memory, storage, and networking in a Virtual environment
- Demonstrate how to Copy, backup, and restore virtual machines

Deploying the Modern Desktop

1 Credit/30 Clock-Hours

As desktops have evolved, so have methods for deploying and updating them. In this course, you'll learn how to plan and implement an operating system deployment strategy. This course will help students understand the various methods available, the scenarios they're suited for, as well as how to deploy Windows using modern methods. This course will also cover planning and implementing an update strategy for Windows.

Objectives:

- Develop an Operating System deployment and upgrade strategy.
- Understand the different methods of deployment.
- Understand which scenarios on-premise and cloud-based solutions can be used for.
- Deploy and migrate desktop operating systems.
- Plan and configure Windows Update policies.

Microsoft Windows Server Administration Fundamentals

2 Credits/60 Clock-Hours

The Microsoft Windows Server Administration Fundamentals course offers a hands-on introduction to Windows Server administration. The student will explore basic systems administration of workstations and servers in a Windows domain, emphasizing the use of Active Directory for common everyday add, move, and change tasks.

Objectives:

- Identify, define, and describe server roles, features, and services
- Install, configure, and manage server roles and services including Domain Controllers, Active Directory, Group Policy, DHCP, DNS, and Remote Access Services
- Recognize and implement the proper share permissions on File and Print Servers
- Implement effective storage solutions using RAID and other fault-tolerant storage technologies
- Identify the importance of security updates and software update packages
- Perform Server Troubleshooting, Performance Tuning and Maintenance
- Explain fault-tolerance and disaster recovery
- Configure, manage, monitor, and troubleshoot security in a Directory Services Infrastructure

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam



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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

CompTIA Project +

3 Credits/90 Clock-Hours

This course studies the planning and processes involved in an information technology project. Topics include planning, scheduling, and controlling aspects of a project during its life cycle. The course introduces students to project management and explains project management as it applies to managing information technology. It also helps students develop the skills required to initiate, plan, execute, control, and close projects. This course prepares students for exams such as the CompTIA Project + certification exam.

Objectives:

- Explain the benefits of IT project management
- Examine the project management lifecycle
- Demonstrate how to establish a project charter and project team
- Demonstrate project estimating and scheduling

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FY2023 / 30 Credits (900 Clock-Hours)

- Describe the creation of project plans and project reporting

IT Externship

2 Credits/90 Clock-Hours

Students will have the opportunity to develop real-world work experiences using knowledge and skills they have obtained in the program. Students will gain practical application of classroom skills through actual work situations. IT projects will be assigned to the student by cooperative businesses. Students will receive objective feedback on their performance each month. Customized student learning objectives will be developed addressing the individual needs of the organization and career interests of each student by the cooperative business and the student.

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Demonstrate ability to work independently
- Demonstrate ability to receive constructive criticism
- Write cooperatively with faculty and agency to create personalized objectives to be accomplished during the internship

Special Projects I

1 Credit/30 Clock-Hours

Special Projects I provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Special Projects II

2 Credits/60 Clock-Hours

Special Projects II provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.



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FY2023 / 30 Credits (900 Clock-Hours)

Special Projects III

3 Credits/90 Clock-Hours

Special Projects III provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Dixie Technical College

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies



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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep V

1 Credit/30 Clock-Hours

Certification Test Prep V provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep VI

1 Credit/30 Clock-Hours

Certification Test Prep VI provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Final Project

3 Credit/90 Clock-Hours

This course provides students a unique or advanced skill development identified as an immediate need in the current occupational industry.

Objectives:

- Demonstrate skills taught required for entry level positions in the information technology field
- Install, configure, maintain, and troubleshoot common hardware and software issues
- Design, implement and manage a scalable network
- Identify advanced security threats and implement best practices to mitigate risks
- Demonstrate effective verbal and written communication using industry specific terminology



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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Ogden-Weber Technical College

Information Technology Fundamentals

2 Credits/60 Clock-Hours

This course provides an overview of the various career pathways related to working with computers. Throughout the class, students will be introduced to computers, including their history, hardware, operating systems, system support, programming languages, software, databases, networking, data storage, and system security. During this course, the student will perform essential IT tasks commonly performed by end-users and entry-level IT professionals. This course aligns with the objectives of the CompTIA ITF+ certification exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Introduction to Virtualization

1 Credit/30 Clock-Hours

Introduction to Virtualization explores what Virtualization is and the critical role it plays in IT. Learn how to install, configure, and maintain virtual machines as well as the availability, applications, and virtual appliances, including their role in Virtualization.

Objectives:

- Explore Virtualization and the benefits gained from a Virtual environment
- Demonstrate how to enable Virtualization on a host system.
- Install operating systems on Virtual machines
- Import/Export Virtual machines for use in different virtualization platforms
- Configure basic processing, memory, storage, and networking in a Virtual environment
- Demonstrate how to Copy, backup, and restore virtual machines

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives

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- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep V

1 Credit/30 Clock-Hours

Certification Test Prep V provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep VI

1 Credit/30 Clock-Hours

Certification Test Prep VI provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam



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FY2023 / 30 Credits (900 Clock-Hours)

Network Traffic Analysis

1 Credit/30 Clock-Hours

This course provides instruction on the fundamental basics of network traffic analysis. This course will cover the process of recording, reviewing, and analyzing network traffic for performance, security and/or general network operations and management.

Objectives:

- Describe and evaluate network utilization
- Record, filter and analyze different types of network traffic
- Demonstrate use of network analysis tools
- Identify types of network connections

Ethical Hacking

3 Credits/90 Clock-Hours

Ethical Hacking teaches fundamental network attack strategies and countermeasures. Students learn to use various penetration testing tools to analyze network vulnerabilities and how to counter them and improve network security. This course aligns with the Certified Ethical Hacker (CEH) objectives.

Objectives:

- Perform: reconnaissance, scanning, and enumeration
- Demonstrate Access: Obtain login credentials, administrative access and escalate privileges, access by cracking
- Perform Attacks: Perform passive and active online attacks and infrastructure attacks
- Demonstrate Defense Techniques: Defend systems and devices, implement defensive systems, scan for vulnerabilities

Cybersecurity Analysis

3 Credits/90 Clock-Hours

Cybersecurity Analysis teaches threat and vulnerability management and how to employ tools and methods to secure data and infrastructure and respond to security incidents. The CompTIA CySA+ objectives are covered and serves as a foundation for advanced security credentials.

Objectives:

- Implement appropriate tools and methods to perform a reconnaissance of a system or network
- Gather data and analyze the results of a reconnaissance
- Describe and implement techniques and procedures needed to secure an organization
- Classify threat data or activities for their impact on a security incident
- Manage incident response, recovery, and reporting

Linux +

3 Credits/90 Clock-Hours

Linux + provides instructions on how to install, configure, manage, and maintain a Linux server. Topics include: SSH, VNC, Webmin, NIS and LDAP. Students learn to install, configure, and administer a Linux server. This course aligns with the CompTIA Linux + objectives.

Objectives:

- Configure the Linux file systems
- Configure file sharing services
- Configure network services



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FY2023 / 30 Credits (900 Clock-Hours)

- Demonstrate competency with Linux Administration Tools

IT Externship

2 Credits/90 Clock-Hours

Students will have the opportunity to develop real-world work experiences using knowledge and skills they have obtained in the program. Students will gain practical application of classroom skills through actual work situations. IT projects will be assigned to the student by cooperative businesses. Students will receive objective feedback on their performance each month. Customized student learning objectives will be developed addressing the individual needs of the organization and career interests of each student by the cooperative business and the student.

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Demonstrate ability to work independently
- Demonstrate ability to receive constructive criticism
- Write cooperatively with faculty and agency to create personalized objectives to be accomplished during the internship

Special Projects I

1 Credit/30 Clock-Hours

Special Projects I provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Special Projects II

2 Credits/60 Clock-Hours

Special Projects II provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.



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Special Projects III

3 Credits/90 Clock-Hours

Special Projects III provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Linux Computing with Raspberry Pi

2 Credits/60 Clock-Hours

This course will provide students the opportunity to use the Linux operating system to create ten useful projects using a Raspberry Pi computer and various peripherals.

Objectives:

- Explain basic functionality and limitations of Raspberry Pi computers
- Demonstrate programming using Raspbian and other Linux-based operating systems
- Explore thousands of project ideas that can be created using Linux and a Raspberry Pi
- Troubleshoot software and hardware errors
- Create ten useful projects using a Raspberry Pi computer

Intermediate Service Desk

2 Credits/60 Clock-Hours

This course provides a hands-on service desk experience where students will complete activities that will hone the customer service, documentation, and troubleshooting skills needed to obtain a position as a service desk professional. This course also provides multiple opportunities to complete real world tickets as part of our free community computer support service desk.

Objectives:

- Explain the common tasks associated with the service desk
- Use best practice techniques with customers
- Research and present information to customers
- Create troubleshooting tools
- Use common troubleshooting steps
- Build clean Windows images for installation
- Perform basic Active Directory tasks
- Complete Service Desk tickets for family, friends, and the community

Introduction to Cybersecurity

1 Credits/30 Clock-Hours

This course will provide foundational cybersecurity knowledge in preparation for more advanced cybersecurity courses as well as an introduction to career prospects in cybersecurity.



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Objectives:

- Identify various types of security software
- Demonstrate the use of software to mitigate risk in a lab environment
- Define security best practices
- Analyze various software logs
- Summarize major risk frameworks
- Identify social engineering techniques
- Identify accurate and trustworthy security news sources
- Explore career opportunities in cybersecurity

Salt Lake Community College

Microsoft 365 Fundamentals

3 Credits/90 Clock-Hours

The Microsoft 365 Fundamentals course provides instruction on how Microsoft 365 solutions address common organizational technology challenges including productivity, collaboration, and communication. Topics include endpoint and application management, desktop virtualization, automated operating system deployment, Microsoft 365 licensing, deployment and migration assistance, and product support options. This course aligns with the objectives of the Microsoft MS 900 certification exam.

Objectives:

- Identify and describe cloud concepts
- Describe core Microsoft 365 services and solutions
- Describe security, compliance, privacy, and trust in Microsoft 365
- Compare and contrast Microsoft 365 licensing, pricing, and support option

Microsoft Azure Fundamentals

2 Credits/60 Clock-Hours

The Microsoft Azure Fundamentals course is an introduction to the Microsoft Azure cloud platform and includes instruction on foundational cloud concepts, the Azure management portal, Azure architecture and services, Azure storage and workloads, security and privacy in Azure, as well as Azure resource deployment, service monitoring, pricing, and cost management. This course aligns with the objectives of the Microsoft AZ 900 Azure Fundamentals certification exam.

Objectives:

- Describe Azure cloud concepts, services, workloads, security and privacy
- Describe Azure core architectural components and services
- Describe Azure compute and networking services
- Describe Azure management and governance

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests

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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Cybersecurity Analysis

3 Credits/90 Clock-Hours

Cybersecurity Analysis teaches threat and vulnerability management and how to employ tools and methods to secure data and infrastructure and respond to security incidents. The CompTIA CySA+ objectives are covered and serves as a foundation for advanced security credentials.

Objectives:

- Implement appropriate tools and methods to perform a reconnaissance of a system or network
- Gather data and analyze the results of a reconnaissance
- Describe and implement techniques and procedures needed to secure an organization
- Classify threat data or activities for their impact on a security incident
- Manage incident response, recovery, and reporting

Introduction to Cybersecurity

1 Credits/30 Clock-Hours

This course will provide foundational cybersecurity knowledge in preparation for more advanced cybersecurity courses as well as an introduction to career prospects in cybersecurity.

Objectives:

- Identify various types of security software
- Demonstrate the use of software to mitigate risk in a lab environment
- Define security best practices
- Analyze various software logs



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

- Summarize major risk frameworks
- Identify social engineering techniques
- Identify accurate and trustworthy security news sources
- Explore career opportunities in cybersecurity

Snow College

Orientation

1 Credits/30 Clock-Hours

Orientation is designed to introduce students to the program and degree pathway for the CIS department. Students will be introduced to the curriculum, pathways, and industry certifications. Students will be introduced to the learning model utilized in the department to include; online/hybrid instruction, required clock hours in class, and program outcomes. Students will learn how to utilize software platforms used in the program for learning (e.g., Canvas, NetAcad, and Packet Tracer).

Objectives:

- Describe the coursework, pathway, certificates, and degree.
- Describe and operate within the CIS department educational model.
- Describe the industry certifications and specialized departmental badges.
- Demonstrate proficiency with Canvas, NetAcad, and Packet Tracer.

Networking Essentials

2 Credits/60 Clock-Hours

Networking Essentials will introduce students to the importance of networking in a digital world, and introduced network essentials required in many business functions today including business critical data and operations, cybersecurity, and much more. Students will learn to install a home and small business network, develop basic network troubleshooting skills, and recognize network threats and basic mitigation techniques.

Objectives:

- Plan and install simulated home or small business networks and wireless networks.
- Verify settings and troubleshoot network connectivity.
- Identify and mitigate network security threats.

Introduction to IOT

3 Credit/90 Clock-Hours

Introduction to IOT is designed to give the student an introduction to the Internet of Things (IoT). Students will learn how these devices connect, how they expand and transform our current technology, and considerations for securing these devices. Students will also learn the basics of the IoT technology and receive a better understanding of smart devices and the role they play in the modern world technology landscape.

Objectives:

- Discuss how the current digital transformation is creating unprecedented economic opportunity.
- Describe how the IoT (Internet of Things) is bridging the gap between operational and information technology systems.
- Describe how standard business processes are being transformed.
- Identify the security concerns that must be considered when implementing IoT solutions.



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Cybersecurity Essentials

3 Credit/90 Clock-Hours

Cybersecurity Essentials will introduce students to the essentials of network security concepts using Cisco equipment. Students will become familiar with network attackers and their attacks, security basics, network and web security, cryptography, operational security, firewalls, adaptive security appliances, policies and procedures related to network security.

Objectives:

- Describe security threats facing modern network infrastructures and secure network device access.
- Describe authentication, authorization, and access principles for network access and implement AAA on network devices.
- Mitigate network threats utilizing access control lists.
- Secure network management and reporting channels.
- Configure firewall and adaptive security appliances (ASA).
- Configure site-to-site VPNs utilizing the IPsec protocol.
- Describe and effective security policies related to the administration and security of a routed network.

Tooele Technical College

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep V

1 Credit/30 Clock-Hours

Certification Test Prep V provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep VI

1 Credit/30 Clock-Hours

Certification Test Prep VI provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Cisco CCNA Introduction to Networks

3 Credits/90 Clock-Hours

The Cisco Certified Network Associated (CCNA) Introduction to Networks curriculum introduces the architectures, models, protocols, and networking elements that connect users, devices, applications and data through the Internet and across modern computer networks. Learn to build simple local area networks (LANs) that integrate IP addressing schemes, configure foundational network security, and perform basic configurations for routers and switches.

Objectives:

- Build simple LANs, perform basic configurations for routers and switches, and implement IPv4 and IPv6 addressing schemes.
- Configure routers, switches, and end devices to provide access to local and remote network resources and to enable end-to-end connectivity between remote devices.
- Develop critical thinking and problem-solving skills using real equipment and Cisco Packet Tracer
- Configure and troubleshoot connectivity of a small network using security best practices

Cisco CCNA Switching, Routing, and Wireless Essentials (SWRE)

3 Credits/90 Clock-Hours

The Cisco CCNA Switching, Routing, and Wireless Essentials (SWRE) course focuses on switching technologies and router operations that support small-to-medium business networks and includes wireless local area network (WLAN) and security concepts. Students learn key switching and routing concepts. They can perform basic network configuration and troubleshooting, identify and mitigate local area network (LAN) security threats, and configure and secure a basic WLAN.

Objectives:

- Utilizing routers, switches and wireless devices, configure and troubleshoot VLANs,
- Wireless LANs and Inter-VLAN routing
- Configure and troubleshoot redundancy on a switched network using STP and EtherChannel
- Develop critical thinking and problem-solving skills using real equipment and Cisco Packet Tracer
- Explain how to support available and reliable networks using dynamic addressing and first-hop redundancy protocols

Cisco CCNA Enterprise Networking, Security, and Automation (ENSA)

3 Credits/90 Clock-Hours

The Cisco Certified Networking Associate (CCNA) Enterprise Networking, Security, and Automation course covers the architecture, security, and operation of an enterprise network, along with introducing new ways in which network engineers interact with programmable infrastructure. Gain skills to configure and troubleshoot enterprise networks, learn to identify and protect against cybersecurity threats, and discover key concepts of software-defined networking, including controller-based architectures and application programming interfaces (APIs).

Objectives:

- Configure routers and switches using OSPF in point-to-point and multiaccess networks
- Mitigate threats and enhance network security using access control lists and security best practices
- Develop critical thinking and problem-solving skills using real equipment and Cisco Packet Tracer.
- Explore virtualization, SDN, and how APIs and configuration management tools enable network automation



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Linux +

3 Credits/90 Clock-Hours

Linux + provides instructions on how to install, configure, manage, and maintain a Linux server. Topics include: SSH, VNC, Webmin, NIS and LDAP. Students learn to install, configure, and administer a Linux server. This course aligns with the CompTIA Linux + objectives.

Objectives:

- Configure the Linux file systems
- Configure file sharing services
- Configure network services
- Demonstrate competency with Linux Administration Tools

Ethical Hacking

3 Credits/90 Clock-Hours

Ethical Hacking teaches fundamental network attack strategies and countermeasures. Students learn to use various penetration testing tools to analyze network vulnerabilities and how to counter them and improve network security. This course aligns with the Certified Ethical Hacker (CEH) objectives.

Objectives:

- Perform: reconnaissance, scanning, and enumeration
- Demonstrate Access: Obtain login credentials, administrative access and escalate privileges, access by cracking
- Perform Attacks: Perform passive and active online attacks and infrastructure attacks
- Demonstrate Defense Techniques: Defend systems and devices, implement defensive systems, scan for vulnerabilities

Cybersecurity Analysis

3 Credits/90 Clock-Hours

Cybersecurity Analysis teaches threat and vulnerability management and how to employ tools and methods to secure data and infrastructure and respond to security incidents. The CompTIA CySA+ objectives are covered and serves as a foundation for advanced security credentials.

Objectives:

- Implement appropriate tools and methods to perform a reconnaissance of a system or network
- Gather data and analyze the results of a reconnaissance
- Describe and implement techniques and procedures needed to secure an organization
- Classify threat data or activities for their impact on a security incident
- Manage incident response, recovery, and reporting

Special Projects I

1 Credit/30 Clock-Hours

Special Projects I provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.



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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Special Projects II

2 Credits/60 Clock-Hours

Special Projects II provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Special Projects III

3 Credits/90 Clock-Hours

Special Projects III provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Microsoft Azure Fundamentals

2 Credits/60 Clock-Hours

The Microsoft Azure Fundamentals course is an introduction to the Microsoft Azure cloud platform and includes instruction on foundational cloud concepts, the Azure management portal, Azure architecture and services, Azure storage and workloads, security and privacy in Azure, as well as Azure resource deployment, service monitoring, pricing, and cost management. This course aligns with the objectives of the Microsoft AZ 900 Azure Fundamentals certification exam.

Objectives:

- Describe Azure cloud concepts, services, workloads, security and privacy
- Describe Azure core architectural components and services
- Describe Azure compute and networking services
- Describe Azure management and governance



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Microsoft 365 Fundamentals

3 Credits/90 Clock-Hours

The Microsoft 365 Fundamentals course provides instruction on how Microsoft 365 solutions address common organizational technology challenges including productivity, collaboration, and communication. Topics include endpoint and application management, desktop virtualization, automated operating system deployment, Microsoft 365 licensing, deployment and migration assistance, and product support options. This course aligns with the objectives of the Microsoft MS 900 certification exam.

Objectives:

- Identify and describe cloud concepts
- Describe core Microsoft 365 services and solutions
- Describe security, compliance, privacy, and trust in Microsoft 365
- Compare and contrast Microsoft 365 licensing, pricing, and support option

Hybrid Server Core

4 Credits/120 Clock-Hours

The Hybrid Server Core course teaches configuring and managing Windows Server on-premises, hybrid, and Infrastructure as a Service platform workloads. Learn on-premises and hybrid solutions, such as identity, security, management, compute, networking, storage, monitoring, and disaster recovery. Microsoft AZ-800 Certification objectives are covered.

Objectives:

- Deploy and manage Active Directory Domain Services in on-premises and cloud environments
- Manage Windows Servers and workloads in a hybrid environment
- Manage virtual machines and containers
- Implement and manage an on-premises and hybrid networking infrastructure
- Manage storage and file services.

Hybrid Server Advanced

4 Credits/120 Clock-Hours

The Hybrid Server Advanced course focuses more on security, high availability, backup and recovery, troubleshooting, monitoring, and migration from on-premises to Azure. Microsoft AZ-801 certification objectives are covered.

Objectives:

- Manage Windows Servers and workloads in a hybrid environment
- Secure Windows Server on-premises and hybrid infrastructures
- Implement and manage Windows Server high availability
- Implement disaster recovery
- Migrate servers and workloads
- Monitor and troubleshoot Windows Server environments.

Uintah Basin Technical College

Introduction to Python

2 Credits/60 Clock-Hours

Intro to Python will cover functional programming in python. Students will learn common functions, loops, operators, and conditionals. They will learn how to implement and manipulate lists, tuples, and dictionaries. They will create basic python scripts such as Fizzbuzz and text-based adventure games. This course will prepare students for further python training.

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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Objectives:

- Demonstrate understanding of Python functions, create custom functions.
- Demonstrate understanding of loops, and conditionals.
- Create a text-based adventure game utilizing all tools learned.

Microsoft Windows Server Administration Fundamentals

2 Credits/60 Clock-Hours

The Microsoft Windows Server Administration Fundamentals course offers a hands-on introduction to Windows Server administration. The student will explore basic systems administration of workstations and servers in a Windows domain, emphasizing the use of Active Directory for common everyday add, move, and change tasks.

Objectives:

- Identify, define, and describe server roles, features, and services
- Install, configure, and manage server roles and services including Domain Controllers, Active Directory, Group Policy, DHCP, DNS, and Remote Access Services
- Recognize and implement the proper share permissions on File and Print Servers
- Implement effective storage solutions using RAID and other fault-tolerant storage technologies
- Identify the importance of security updates and software update packages
- Perform Server Troubleshooting, Performance Tuning and Maintenance
- Explain fault-tolerance and disaster recovery
- Configure, manage, monitor, and troubleshoot security in a Directory Services Infrastructure

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam



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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep V

1 Credit/30 Clock-Hours

Certification Test Prep V provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep VI

1 Credit/30 Clock-Hours

Certification Test Prep VI provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Technical Installation

2 Credits/60 Clock-Hours

This course will focus on combining technical skills with light construction. Students will learn how to install and configure physical network infrastructure, security and door access, and smart home technologies. This course will provide instruction in the use of small construction tools including stud finders, cordless drills, saws etc. This course covers the basics of low-voltage technician skills. Students will also learn basic electronic soldering skills.

Objectives:

- Demonstrate the use of basic network and construction tools.
- Successfully install and configure smart home technologies, security devices, and network infrastructure.
- Explain basic low-voltage electrical theory.

Ethical Hacking

3 Credits/90 Clock-Hours

Ethical Hacking teaches fundamental network attack strategies and countermeasures. Students learn to use various penetration testing tools to analyze network vulnerabilities and how to counter them and improve network security. This course aligns with the Certified Ethical Hacker (CEH) objectives.

Objectives:

- Perform: reconnaissance, scanning, and enumeration
- Demonstrate Access: Obtain login credentials, administrative access and escalate privileges, access by cracking
- Perform Attacks: Perform passive and active online attacks and infrastructure attacks
- Demonstrate Defense Techniques: Defend systems and devices, implement defensive systems, scan for vulnerabilities

CompTIA Project +

3 Credits/90 Clock-Hours

This course studies the planning and processes involved in an information technology project. Topics include planning, scheduling, and controlling aspects of a project during its life cycle. The course introduces students to project management and explains project management as it applies to managing information technology. It also helps students develop the skills required to initiate, plan, execute, control, and close projects. This course prepares students for exams such as the CompTIA Project + certification exam.

Objectives:

- Explain the benefits of IT project management
- Examine the project management lifecycle
- Demonstrate how to establish a project charter and project team
- Demonstrate project estimating and scheduling
- Describe the creation of project plans and project reporting

Special Projects I

1 Credit/30 Clock-Hours

Special Projects I provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Special Projects II

2 Credits/60 Clock-Hours

Special Projects II provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Telecommunications

2 Credits/60 Clock-Hours

This course will focus on the telecommunications equipment that supports the backbone of the modern internet. Students will learn how to install, program, and maintain edge routers, MSPP's (MultiService Provisioning Platform), ODXC (Optical Digital Cross Connect), and other communication devices. They will also learn how to create and implement emergency power backup plans.

Objectives:

- Identify common communication cables
- Demonstrate best practices when running cables and cable management
- Program common communication devices
- Identify vulnerabilities in the network and implement security measures
- Create and implement an emergency power backup plan

Utah State University

Introduction to Programming

3 Credit/90 Clock-Hours

This course introduces computer programming/software engineering and applications. Students learn the fundamentals of computer programming, simple controls and data structures, and operating system commands. Students learn to design, code, and test their own programs, and apply mathematical skills.

Objectives:

- Modify existing Python programs
- Write original Python programs
- Demonstrate the use of:
 - Different data types and variables



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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

- Decision structures such as If and If-elif-else
- Loops structures such as While, and For
- Functions
- Lists, Tuples, Dictionaries and Sets
- String manipulations
- Files (read and write)
- Classes and Object-Oriented Programming

Introduction to Mobile Application Development

3 Credit/90 Clock-Hours

This course introduces students to the fundamentals of mobile application development. Students learn to design, code and test their own mobile applications.

Objectives:

- Create mobile apps using Android Studio
- Debug mobile apps
- Explain and use:
 - Techniques to create native app interfaces
 - Different activities and pass data between them
 - Activities to display list data in an app
 - Persistent data to store, retrieve, and manipulate data files
 - Hardware and device sensor APIs in programs in order to capture and integrate sensor data
- Discuss how monetize and publish apps

Website Design

3 Credit/90 Clock-Hours

This course focuses on design and construction of Web pages using HTML, Cascading Style Sheets, and JavaScript. Students will have hands-on experience creating and publishing web pages. This course also focuses on basics of hosting, publishing, promoting, and maintaining websites.

Objectives:

- Understand web hosting and critique website designs
- Demonstrate use of HTML5 and Cascading Style Sheets (CSS) in developing web pages
- Develop web pages using images, multimedia, tables and forms.
- Apply basic JavaScripting to web Pages
- Publish, Promote, and Maintain a website
- Evaluate and use Website Builders or Content Management Systems (CMS)

Digital Video Production

3 Credit/90 Clock-Hours

This course covers fundamentals of digital video production, including recording, editing, and uploading of video using current video-editing programs and techniques. Students will have hands-on experience with projects to help them apply current digital video production concepts.

Objectives:

- Explain how professional audio-visual production is directed and managed to create useful multimedia materials
- Discuss basic video production techniques that make a quality recording and production

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Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

- Create video/audio resources from concept inception through storyboarding, scripting, recording, editing and media conversion
- Create digital video productions more effectively using graphics, titling, and/or channel masks in the video editing process
- Create audio and video effects and animation
- Prepare video for use in HTML pages, YouTube, or other multimedia storage locations

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep V

1 Credit/30 Clock-Hours

Certification Test Prep V provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep VI

1 Credit/30 Clock-Hours

Certification Test Prep VI provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Linux +

3 Credits/90 Clock-Hours

Linux + provides instructions on how to install, configure, manage, and maintain a Linux server. Topics include: SSH, VNC, Webmin, NIS and LDAP. Students learn to install, configure, and administer a Linux server. This course aligns with the CompTIA Linux + objectives.

Objectives:

- Configure the Linux file systems
- Configure file sharing services
- Configure network services
- Demonstrate competency with Linux Administration Tools

Photoshop

3 Credits/90 Clock-Hours

This course is designed to teach the use of Photoshop. Students will gain hands-on experience from basic touch up and editing to advance editing and creation of graphics for various uses including images for the Websites.

Objectives:

- Perform photo corrections and work with selections and layers



Utah System of Higher Education

Information Technology & Cybersecurity

FY2023 / 30 Credits (900 Clock-Hours)

- Use masks and channels and work with typographic design
- Perform vector drawing and advanced compositing
- Prepare files for the Web and produce and understand how to print with consistent coloring

Web Business

3 Credits/90 Clock-Hours

This course is an introduction to Web-based business. Students will learn business concepts relating to on-line and world-wide e-commerce. Also marketing concepts, design strategies, and technical issues as they relate to Web-based businesses will be discussed.

Objectives:

- Review technology infrastructure of the Internet and the World Wide Web
- Understand the implications of selling on the web — regional and worldwide
- Develop marketing concepts on the web in conjunction with social media, mobile, and online auctions.
- Explain how to improve efficiency and reduce costs
- Discuss the environment of electronic commerce involving ethical, legal, and tax Issues
- Explain web server hardware and software, electronic commerce software and associated security needs
- Plan for electronic commerce including the implementation of payment systems that are commonly used

Professionalism

3 Credits/90 Clock-Hours

Professionalism explores behaviors, attitudes, and human skills essential for workplace success. Students will study how to build strong customer relations and provide outstanding customer service in a diverse workplace. Students will use professional skills to prepare for potential career opportunities.

Objectives:

- Explain the importance of human skills for success in the workplace
- Explore the foundations of a service culture and develop relationship management skills
- Demonstrate preparedness for potential career opportunities
- Practice acceptable workplace conduct, including self-management, willingness to learn, and workplace relationships

Management Principles

2 Credits/60 Clock-Hours

Management principles will address strategies related to starting, owning, operating, and growing a small business. Students will explore marketing, financial management, leadership, ethics, and growth opportunities. Upon successful completion of this course, students will be able to demonstrate industry-level competency.

Objectives:

- Explore the human and legal aspects of starting and organizing a business
- Practice analyzing and managing the financial aspects of a business including cash flow, financing, and profit management
- Demonstrate an understanding of how to manage the operations of a business effectively and efficiently



Utah System of Higher Education

Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Information Technology			
Institutions: Bridgerland, Davis, Mountainland, Ogden-Weber, Salt Lake, Snow, Southwest, Tooele, Uintah Basin, USU-E			
<i>Certificate of Program Completion (Catalog Year: 2023, 20 Credits/600 Clock-Hours Required, CIP: 11.0901)</i>			
Core (14 Credits/420 Clock-Hours)		Credits	Clock-Hours
TEIT 1200	A+ Core I	3	90
TEIT 1210	A+ Core II	3	90
TEIT 2100	Computer Networks	4	120
TEIT 1300	Linux Foundations	2	60
TEIT 1100	Introduction to Networking	1	30
TEIT 1050	Career & Workplace Relations	1	30
Electives (6 Credits/180 Clock-Hours)			
<i>Bridgerland Technical College</i>			
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 2140	Network Traffic Analysis	1	30
TEIT 1900	Service Desk Internship	2	90
TEIT 1550	Practical Python	3	90
TEIT 1040	Introduction to Virtualization	1	30
TEIT 2900	IT Externship	2	90
TEIT 2901	Special Applications	1-6	30-180
TEIT 1090	IT STEM	1-4	30-120
<i>Davis Technical College</i>			
TEIT 1000	Information Technology Fundamentals	2	60
TEIT 1020	Foundations of Computing	2	60
TEIT 1400	Introduction to Cloud	2	60
TEIT 1600	Microsoft 365 Fundamentals	3	90
TEIT 1650	Remote Desktop Technologies	1	30
TEIT 1040	Introduction to Virtualization	1	30
TEIT 1640	Deploying the Modern Desktop	1	30
TEIT 1500	Introduction to Scripting	1	30
TEIT 1630	Microsoft Windows Server Administration Fundamentals	2	60
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT 1830	Certification Test Prep IV	1	30
<i>Mountainland Technical College</i>			
TEIT 1000	Information Technology Fundamentals	2	60
TEIT 1120	Customer Service Skills	1	30
TEIT 1250	Professionalism and Leadership	1	30
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
<i>Ogden-Weber Technical College</i>			
TEIT 1000	Information Technology Fundamentals	2	60



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TEIT 1040	Introduction to Virtualization	1	30
TEIT 1400	Introduction to Cloud	2	60
TEIT 1500	Introduction to Scripting	1	30
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 2140	Network Traffic Analysis	1	30
TEIT 2200	Security +	4	120
TEIT 2250	Ethical Hacking	3	90
TEIT 2270	Cybersecurity Analysis	3	90
TEIT 2300	Linux +	3	90
TEIT 2900	IT Externship	2	90
TEIT 2910	Special Projects I	1	30
TEIT 2920	Special Projects II	2	60
TEIT 2930	Special Projects III	3	90
TEIT 1290	Linux Computing with Raspberry Pi	2	60
TEIT 1940	Intermediate Service Desk	2	60
TEIT 1110	Introduction to Cybersecurity	1	30
Salt Lake Community College			
TEIT 1110	Introduction to Cybersecurity	1	30
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 2200	Security +	4	120
Snow College			
CIS 1000	Orientation	1	30
CIS 1130	Networking Essentials	2	60
CIS 1500	Introduction to IOT	3	90
Southwest Technical College			
TEIT 2200	Security +	4	120
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 2900	IT Externship	2	90
TEIT 2920	Special Projects II	2	60
Tooele Technical College			
TEIT 2200	Security +	4	120
TEIT 1400	Introduction to Cloud	2	60
TEIT 1500	Introduction to Scripting	1	30
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 2910	Special Projects I	1	30
TEIT 2920	Special Projects II	2	60
TEIT 2930	Special Projects III	3	90
Uintah Basin Technical College			



Utah System of Higher Education
Information Technology
FY2023 / 20 Credits (600 Clock-Hours)

TEIT 1500	Introduction to Scripting	1	30
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 1820	Certification Test Prep III	1	30
TEIT 1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
ITEC 1012	Introduction to Python	2	60
TEIT 2106	Technical Installation	2	60
TEIT 1910	Telecommunications	2	60
<i>Utah State University - Eastern</i>			
TEIT 1041	Introduction to Programming	3	90
TEIT 1310	Website Design	3	90
TEIT 2500	Web Business	3	90
TEBP 1200	Professionalism	3	90



Utah System of Higher Education

Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

PROGRAM DESCRIPTION

This program provides education and training in preparation for employment in Information Technology. Throughout the program, students apply classroom theory to computer hardware and software, mobile devices, operating systems, networking, security, cloud technology and other technologies relevant to the industry. Through a combination of simulations, hands-on and virtual labs, students will apply techniques for technology deployment, support, maintenance and troubleshooting. This training can be used as a step to gain valuable industry recognized certifications including CompTIA A+ and Network+. Additional certification opportunities may include CompTIA Security+, Microsoft, Amazon Web Services (AWS), Linux and more.

Objectives

- Develop and demonstrate skills required for entry level positions in Information Technology
- Demonstrate knowledge, skills and abilities aligning with standards for industry certifications
- Install, configure, maintain and troubleshoot common hardware and software
- Install, configure, maintain and troubleshoot operating systems
- Demonstrate effective verbal and written communication using industry specific terminology

COURSE DESCRIPTIONS

A+ Core I

3 Credit/90 Clock-Hours

A+ Core I prepares students to be successful computer technicians, capable of installing, maintaining, troubleshooting, optimizing, and securing desktop computers, laptops, mobile devices, and printers. This course aligns with objectives of the CompTIA A+ Core 1 certification exam.

Objectives:

- Install and configure computer hardware components and peripheral devices.
- Identify and configure basic networking components and protocols.
- Install and configure laptops and other mobile devices.
- Diagnose and troubleshoot device and network issues.
- Compare and contrast cloud computing concepts.
- Configure client-side virtualization.

A+ Core II

3 Credit/90 Clock-Hours

A+ Core II is a follow-up to A+ Core1 and provides further instruction on installation, configuration, maintenance, and security of various common operating systems and platforms. This course aligns with the objectives of the CompTIA A+ Core 2 certification exam.

Objectives:

- Install and Configure Windows, Mac, and Linux.
- Identify best practices for safety, environmental impacts, communication, and professionalism.
- Troubleshoot common operating system, malware, and security issues.
- Identify basic vulnerabilities and protect against threats.
- Install, configure, and maintain software in computers and mobile devices.

Computer Networks

4 Credits/120 Clock-Hours

Computer Networks provides instruction on the installation, configuration, management, and troubleshooting of common components of modern computer networks. This course prepares candidates

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Information Technology

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to support networks across multiple platforms and aligns with the objectives of the CompTIA Network+ certification exam.

Objectives:

- Demonstrate an understanding of core networking concepts and terminology.
- Install, configure, and verify the functionality of networking devices and components given multiple scenarios.
- Identify network security vulnerabilities and mitigations.
- Implement security for a basic network.
- Compare and contrast business continuity and disaster recovery concepts.
- Troubleshoot common network connectivity issues.

Linux Foundations

2 Credits/60 Clock-Hours

Linux Foundations focuses on the installation, configuration, and process management of a Linux workstation. Students explore shell programming, file system management, user accounts, access and permissions, and managing multiple concurrent processes to achieve higher utilization.

Objectives:

- Install and maintain a Linux workstation.
- Configure Linux from the GUI and command line.
- Configure file and access permissions.
- Perform maintenance tasks including user management, backup and restore, shut down, and reboot.

Introduction to Networking

1 Credits/30 Clock-Hours

Introduction to Networking provides foundational-level instruction on the concepts, models, services, settings, protocols, topologies, and devices used in computer networks. Students also explore the Open Systems Interconnection (OSI) and Transmission Control Protocol/Internet Protocol (TCP/IP) models.

Objectives:

- Define common concepts and terms associated with computer networking.
- Identify and differentiate the purpose and function of common networking devices.
- Identify and differentiate common networking ports, protocols and services.
- Identify components of the OSI and TCP/IP models.
- Compare and contrast network topologies and access methods.

Career & Workplace Relations

1 Credits/30 Clock-Hours

Career and Workplace Relations is designed to help students gain insight into how their skills and professionalism enhance relationships between management and coworkers. Instruction includes employment skills such as communication, critical thinking, professional etiquette, team dynamics and more.

Objectives:

- Identify personal and transferable skills, competencies and/or abilities.
- Create an industry specific resume, cover letter, thank you letter, reference list, and online presence.
- Demonstrate effective interviewing skills.
- Submit an application for an industry specific position.

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- Demonstrate effective use of job search websites.

NON-ALIGNED (ELECTIVE) COURSES

Bridgerland Technical College

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies

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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

- Schedule and take the certification exam

Certification Test Prep V

1 Credit/30 Clock-Hours

Certification Test Prep V provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep VI

1 Credit/30 Clock-Hours

Certification Test Prep VI provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Network Traffic Analysis

1 Credit/30 Clock-Hours

This course provides instruction on the fundamental basics of network traffic analysis. This course will cover the process of recording, reviewing, and analyzing network traffic for performance, security and/or general network operations and management.

Objectives:

- Describe and evaluate network utilization
- Record, filter and analyze different types of network traffic
- Demonstrate use of network analysis tools
- Identify types of network connections

Service Desk Internship

2 Credits/90 Clock-Hours

This course provides instruction on customer support, technical documentation and advanced troubleshooting techniques in a service desk environment. Students will have opportunities to work directly with customers' personal equipment in a supervised environment. (Requires adviser approval).

Objectives:

- Demonstrate Advanced troubleshooting techniques and processes
- Document product, customer, and repair information in database
- Demonstrate how to find and research information to properly diagnose and repair personal computers



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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Practical Python

3 Credits/90 Clock-Hours

Practical Python provides instruction on the fundamentals of Object-Oriented Programming in Python. It includes the creation of Python scripting from basic to intermediate as well as the debugging process of creating Python code.

Objectives:

- Demonstrate how to install Python
- Demonstrate a working knowledge of Python by writing a simple syntax
- Troubleshoot Python code problems

Introduction to Virtualization

1 Credit/30 Clock-Hours

Introduction to Virtualization explores what Virtualization is and the critical role it plays in IT. Learn how to install, configure, and maintain virtual machines as well as the availability, applications, and virtual appliances, including their role in Virtualization.

Objectives:

- Explore Virtualization and the benefits gained from a Virtual environment
- Demonstrate how to enable Virtualization on a host system.
- Install operating systems on Virtual machines
- Import/Export Virtual machines for use in different virtualization platforms
- Configure basic processing, memory, storage, and networking in a Virtual environment
- Demonstrate how to Copy, backup, and restore virtual machines

IT Externship

2 Credits/90 Clock-Hours

Students will have the opportunity to develop real-world work experiences using knowledge and skills they have obtained in the program. Students will gain practical application of classroom skills through actual work situations. IT projects will be assigned to the student by cooperative businesses. Students will receive objective feedback on their performance each month. Customized student learning objectives will be developed addressing the individual needs of the organization and career interests of each student by the cooperative business and the student.

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Demonstrate ability to work independently
- Demonstrate ability to receive constructive criticism
- Write cooperatively with faculty and agency to create personalized objectives to be accomplished during the internship

Special Applications

1-6 Credits/30-180 Clock-Hours

The Special Apps course accepts transfer credit from students who have obtained content mastery through a related IT course participation. Content mastery may be obtained from curricula or transcript. Credit will be determined through competency demonstration of hardware devices and/or software systems. (Requires advisor approval).

Objectives:

- Obtain competency credit for successful completion of related IT course(s)
- Demonstrate industry level content mastery of prior learning

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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

- Create, design, and build skills necessary to be successful in the Information Technology career cluster

IT STEM

1-4 Credits/30-120 Clock-Hours

The IT STEM course accepts transfer credit from students who have obtained content mastery through IT STEM participation. Content mastery may be obtained from curricula. Credit will be determined through competency demonstration of hardware devices and/or software systems. (Requires advisor approval).

Objectives:

- Obtain competency credit for successful completion of IT STEM course(s)
- Demonstrate industry level content mastery of prior learning
- Create, design, and build skills necessary to be successful in the Information Technology career cluster

Davis Technical College

Information Technology Fundamentals

2 Credits/60 Clock-Hours

The Information Technology Fundamentals course provides an overview of the various career pathways related to working with computers. Throughout the class, students will be introduced to computers, including their history, hardware, operating systems, system support, programming languages, software, databases, networking, data storage, and system security. During this course, the student will perform essential IT tasks commonly performed by end-users and entry-level IT professionals. This course aligns with the objectives of the CompTIA ITF+ certification exam.

Objectives:

- Identify the major components of a computer and understand their function
- Compare and contrast the differences between various operating systems
- Demonstrate an understanding of basic principles of software and database development
- Identify foundational terms used in computing
- Identify security issues affecting the use of computers and networks

Foundations of Computing

2 Credits/60 Clock-Hours

This course provides students with a broad and basic understanding of computers. Students will explore the history of modern computers. Interact with the infrastructure that supports computers, such as networks, databases, and operating systems. Discover the process of identifying and solving real-world problems with computers. Students will create programs and build websites. Discuss security and ethical behaviors associated with computer use.

Objectives:

- Explore the history of modern computers.
- Interact with Databases.
- Describe the infrastructure around a computer.
- Create programs and websites.
- Discuss security and ethical behaviors.



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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Introduction to Cloud

2 Credits/60 Clock-Hours

Introduction to Cloud provides instruction on core cloud computing concepts, services, and solutions as well as foundational knowledge from a business value perspective of the benefits and considerations for cloud computing implementation. Included is an overview of popular cloud platforms.

Objectives:

- Define the value proposition of cloud computing.
- Identify core cloud concepts, services, solutions, and management tools.
- Demonstrate an understanding of cloud security considerations, features, and best practices.
- Describe cloud identity, governance, privacy, and compliance concepts and features.
- Compare and contrast cloud pricing models and identify cost management solutions.
- Define cloud deployment models, methods, and operations.

Microsoft 365 Fundamentals

3 Credits/90 Clock-Hours

The Microsoft 365 Fundamentals course provides instruction on how Microsoft 365 solutions address common organizational technology challenges including productivity, collaboration, and communication. Topics include endpoint and application management, desktop virtualization, automated operating system deployment, Microsoft 365 licensing, deployment and migration assistance, and product support options. This course aligns with the objectives of the Microsoft MS 900 certification exam.

Objectives:

- Identify and describe cloud concepts
- Describe core Microsoft 365 services and solutions
- Describe security, compliance, privacy, and trust in Microsoft 365
- Compare and contrast Microsoft 365 licensing, pricing, and support option

Remote Desktop Technologies

1 Credit/30 Clock-Hours

The hybrid workplace model mixes in-office and remote work to offer flexibility and support to employees. The modern support desk requires specialists to be knowledgeable in the usage of third-party remote software, cloud-based collaboration and sharing, Firewalls, VPN client configuration, remote desktop tools, and the virtual desktop interface. This course runs students through several real-world scenarios and hands-on labs.

Objectives:

- Explain key applications and connectivity options of remote work environments.
- Perform analysis, diagnosis, and resolution of connectivity issues faced in a hybrid workforce environment.
- Identify the key security principles of various cloud infrastructures, apps, and storage choices.
- Compare and contrast Virtual workspaces, VDI, and Desktop as a Service (DaaS).
- Demonstrate professional, clear, and concise verbal and written communication.

Introduction to Virtualization

1 Credit/30 Clock-Hours

Introduction to Virtualization explores what Virtualization is and the critical role it plays in IT. Learn how to install, configure, and maintain virtual machines as well as the availability, applications, and virtual appliances, including their role in Virtualization.

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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Objectives:

- Explore Virtualization and the benefits gained from a Virtual environment
- Demonstrate how to enable Virtualization on a host system.
- Install operating systems on Virtual machines
- Import/Export Virtual machines for use in different virtualization platforms
- Configure basic processing, memory, storage, and networking in a Virtual environment
- Demonstrate how to Copy, backup, and restore virtual machines

Deploying the Modern Desktop

1 Credit/30 Clock-Hours

As desktops have evolved, so have methods for deploying and updating them. In this course, you'll learn how to plan and implement an operating system deployment strategy. This course will help students understand the various methods available, the scenarios they're suited for, as well as how to deploy Windows using modern methods. This course will also cover planning and implementing an update strategy for Windows.

Objectives:

- Develop an Operating System deployment and upgrade strategy.
- Understand the different methods of deployment.
- Understand which scenarios on-premise and cloud-based solutions can be used for.
- Deploy and migrate desktop operating systems.
- Plan and configure Windows Update policies.

Introduction to Scripting

1 Credits/30 Clock-Hours

Introduction to Scripting provides instruction on basic scripting concepts. Students are introduced to scripting fundamentals to automate tasks that would otherwise be performed manually. Students explore the practical use and management of scripts to perform system administration functions.

Objectives:

- Demonstrate an understanding of the features of scripting languages.
- Implement critical thinking and problem-solving skills through practical exercises.
- Perform automation of systems tasks and functions.

Microsoft Windows Server Administration Fundamentals

2 Credits/60 Clock-Hours

The Microsoft Windows Server Administration Fundamentals course offers a hands-on introduction to Windows Server administration. The student will explore basic systems administration of workstations and servers in a Windows domain, emphasizing the use of Active Directory for common everyday add, move, and change tasks.

Objectives:

- Identify, define, and describe server roles, features, and services
- Install, configure, and manage server roles and services including Domain Controllers, Active Directory, Group Policy, DHCP, DNS, and Remote Access Services
- Recognize and implement the proper share permissions on File and Print Servers
- Implement effective storage solutions using RAID and other fault-tolerant storage technologies
- Identify the importance of security updates and software update packages
- Perform Server Troubleshooting, Performance Tuning and Maintenance

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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

- Explain fault-tolerance and disaster recovery
- Configure, manage, monitor, and troubleshoot security in a Directory Services Infrastructure

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

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Utah System of Higher Education

Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Mountainland Technical College

Information Technology Fundamentals

2 Credits/60 Clock-Hours

The Information Technology Fundamentals course provides an overview of the various career pathways related to working with computers. Throughout the class, students will be introduced to computers, including their history, hardware, operating systems, system support, programming languages, software, databases, networking, data storage, and system security. During this course, the student will perform essential IT tasks commonly performed by end-users and entry-level IT professionals. This course aligns with the objectives of the CompTIA ITF+ certification exam.

Objectives:

- Identify the major components of a computer and understand their function
- Compare and contrast the differences between various operating systems
- Demonstrate an understanding of basic principles of software and database development
- Identify foundational terms used in computing
- Identify security issues affecting the use of computers and networks

Customer Service Skills

1 Credit/30 Clock-Hours

The Customer Service course is designed for a customer service treatment in any Service Desk Curriculum. This course teaches an appropriate balance of business, technical, soft, and self-management skills that contribute to making service desks successful. The service desk curriculum provides instruction to support customers using industry standard products and technical support for various computing software.

Objectives:

- Explore what is involved in delivering excellent customer support.
- Explain how support providers can become better listeners and communicate effectively with customers and coworkers.
- Develop the skills that support providers need to interact with customers over the telephone as well as how to avoid the most common call handling mistakes.
- Discuss the impact that technologies such as the Internet, email, instant messaging, chat, knowledge management systems, and social media have had on the service desk in terms of how it collects information and delivers support.
- Explore specific techniques for handling difficult situations and minimizing the frustration and stress support providers may feel afterward.
- Help support providers understand their role in the service desk and the support organization, and how to respect and value their team members' contributions.
- Demonstrate best practices to minimize stress and avoid burnout

Professionalism and Leadership

1 Credit/30 Clock-Hours

The Professionalism and Leadership course is designed to help students identify and develop soft skills for effective work between coworkers and management. The transferable skills that can enhance a resume are identified and discussed. Topics include employment skills such as team dynamics, communication, critical thinking, professional etiquette, team leadership, project management methodologies, including Agile and Scrum. Students put leadership skills into practice under a controlled environment, working with peer mentors and the classroom instructor.

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Information Technology

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Objectives:

- Identify soft skills to enhance one's effectiveness as an information technology professional.
- Contribute to a team in a professional manner.
- Develop verbal and written communication skills
- Explore team leadership and project management using established methodology
- Plan, manage and complete a project and present it to stakeholders

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Ogden-Weber Technical College

Information Technology Fundamentals

2 Credits/60 Clock-Hours

This course provides an overview of the various career pathways related to working with computers. Throughout the class, students will be introduced to computers, including their history, hardware, operating systems, system support, programming languages, software, databases, networking, data storage, and system security. During this course, the student will perform essential IT tasks commonly performed by end-users and entry-level IT professionals. This course aligns with the objectives of the CompTIA ITF+ certification exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

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Utah System of Higher Education

Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Introduction to Virtualization

1 Credit/30 Clock-Hours

Introduction to Virtualization explores what Virtualization is and the critical role it plays in IT. Learn how to install, configure, and maintain virtual machines as well as the availability, applications, and virtual appliances, including their role in Virtualization.

Objectives:

- Explore Virtualization and the benefits gained from a Virtual environment
- Demonstrate how to enable Virtualization on a host system.
- Install operating systems on Virtual machines
- Import/Export Virtual machines for use in different virtualization platforms
- Configure basic processing, memory, storage, and networking in a Virtual environment
- Demonstrate how to Copy, backup, and restore virtual machines

Introduction to Cloud

2 Credits/60 Clock-Hours

Introduction to Cloud provides instruction on core cloud computing concepts, services, and solutions as well as foundational knowledge from a business value perspective of the benefits and considerations for cloud computing implementation. Included is an overview of popular cloud platforms.

Objectives:

- Define the value proposition of cloud computing.
- Identify core cloud concepts, services, solutions, and management tools.
- Demonstrate an understanding of cloud security considerations, features, and best practices.
- Describe cloud identity, governance, privacy, and compliance concepts and features.
- Compare and contrast cloud pricing models and identify cost management solutions.
- Define cloud deployment models, methods, and operations.

Introduction to Scripting

1 Credits/30 Clock-Hours

Introduction to Scripting provides instruction on basic scripting concepts. Students are introduced to scripting fundamentals to automate tasks that would otherwise be performed manually. Students explore the practical use and management of scripts to perform system administration functions.

Objectives:

- Demonstrate an understanding of the features of scripting languages.
- Implement critical thinking and problem-solving skills through practical exercises.
- Perform automation of systems tasks and functions.

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep V

1 Credit/30 Clock-Hours

Certification Test Prep V provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep VI

1 Credit/30 Clock-Hours

Certification Test Prep VI provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives



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FY2023 / 20 Credits (600 Clock-Hours)

- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Network Traffic Analysis

1 Credit/30 Clock-Hours

This course provides instruction on the fundamental basics of network traffic analysis. This course will cover the process of recording, reviewing, and analyzing network traffic for performance, security and/or general network operations and management.

Objectives:

- Describe and evaluate network utilization
- Record, filter and analyze different types of network traffic
- Demonstrate use of network analysis tools
- Identify types of network connections

Security +

4 Credits/120 Clock-Hours

Security+ provides instruction on assessing the security posture of enterprise environments and implementing appropriate security solutions. Instruction is given to identify, analyze, and respond to events and incidents. This course aligns with the objectives of the CompTIA Security+ certification exam.

Objectives:

- Explain security functions and purposes as they relate to network devices.
- Identify and implement risk mitigation techniques and strategies.
- Distinguish and evaluate different network and physical security threats.
- Implement network intrusion detection and prevention technologies.
- Identify and execute appropriate cryptography measures.

Ethical Hacking

3 Credits/90 Clock-Hours

Ethical Hacking teaches fundamental network attack strategies and countermeasures. Students learn to use various penetration testing tools to analyze network vulnerabilities and how to counter them and improve network security. This course aligns with the Certified Ethical Hacker (CEH) objectives.

Objectives:

- Perform: reconnaissance, scanning, and enumeration
- Demonstrate Access: Obtain login credentials, administrative access and escalate privileges, access by cracking
- Perform Attacks: Perform passive and active online attacks and infrastructure attacks
- Demonstrate Defense Techniques: Defend systems and devices, implement defensive systems, scan for vulnerabilities

Cybersecurity Analysis

3 Credits/90 Clock-Hours

Cybersecurity Analysis teaches threat and vulnerability management and how to employ tools and methods to secure data and infrastructure and respond to security incidents. The CompTIA CySA+ objectives are covered and serves as a foundation for advanced security credentials.

Objectives:

- Implement appropriate tools and methods to perform a reconnaissance of a system or network

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FY2023 / 20 Credits (600 Clock-Hours)

- Gather data and analyze the results of a reconnaissance
- Describe and implement techniques and procedures needed to secure an organization
- Classify threat data or activities for their impact on a security incident
- Manage incident response, recovery, and reporting

Linux +

3 Credits/90 Clock-Hours

Linux + provides instructions on how to install, configure, manage, and maintain a Linux server. Topics include: SSH, VNC, Webmin, NIS and LDAP. Students learn to install, configure, and administer a Linux server. This course aligns with the CompTIA Linux + objectives.

Objectives:

- Configure the Linux file systems
- Configure file sharing services
- Configure network services
- Demonstrate competency with Linux Administration Tools

IT Externship

2 Credits/90 Clock-Hours

Students will have the opportunity to develop real-world work experiences using knowledge and skills they have obtained in the program. Students will gain practical application of classroom skills through actual work situations. IT projects will be assigned to the student by cooperative businesses. Students will receive objective feedback on their performance each month. Customized student learning objectives will be developed addressing the individual needs of the organization and career interests of each student by the cooperative business and the student.

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Demonstrate ability to work independently
- Demonstrate ability to receive constructive criticism
- Write cooperatively with faculty and agency to create personalized objectives to be accomplished during the internship

Special Projects I

1 Credit/30 Clock-Hours

Special Projects I provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.



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FY2023 / 20 Credits (600 Clock-Hours)

Special Projects II

2 Credits/60 Clock-Hours

Special Projects II provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Special Projects III

3 Credits/90 Clock-Hours

Special Projects III provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Linux Computing with Raspberry Pi

2 Credits/60 Clock-Hours

This course will provide students the opportunity to use the Linux operating system to create ten useful projects using a Raspberry Pi computer and various peripherals.

Objectives:

- Explain basic functionality and limitations of Raspberry Pi computers
- Demonstrate programming using Raspbian and other Linux-based operating systems
- Explore thousands of project ideas that can be created using Linux and a Raspberry Pi
- Troubleshoot software and hardware errors
- Create ten useful projects using a Raspberry Pi computer

Intermediate Service Desk

2 Credits/60 Clock-Hours

This course provides a hands-on service desk experience where students will complete activities that will hone the customer service, documentation, and troubleshooting skills needed to obtain a position as a service desk professional. This course also provides multiple opportunities to complete real world tickets as part of our free community computer support service desk.

Objectives:

- Explain the common tasks associated with the service desk
- Use best practice techniques with customers

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FY2023 / 20 Credits (600 Clock-Hours)

- Research and present information to customers
- Create troubleshooting tools
- Use common troubleshooting steps
- Build clean Windows images for installation
- Perform basic Active Directory tasks
- Complete Service Desk tickets for family, friends, and the community

Introduction to Cybersecurity

1 Credits/30 Clock-Hours

This course will provide foundational cybersecurity knowledge in preparation for more advanced cybersecurity courses as well as an introduction to career prospects in cybersecurity.

Objectives:

- Identify various types of security software
- Demonstrate the use of software to mitigate risk in a lab environment
- Define security best practices
- Analyze various software logs
- Summarize major risk frameworks
- Identify social engineering techniques
- Identify accurate and trustworthy security news sources
- Explore career opportunities in cybersecurity

Salt Lake Community College

Introduction to Cybersecurity

1 Credits/30 Clock-Hours

This course will provide foundational cybersecurity knowledge in preparation for more advanced cybersecurity courses as well as an introduction to career prospects in cybersecurity.

Objectives:

- Identify various types of security software
- Demonstrate the use of software to mitigate risk in a lab environment
- Define security best practices
- Analyze various software logs
- Summarize major risk frameworks
- Identify social engineering techniques
- Identify accurate and trustworthy security news sources
- Explore career opportunities in cybersecurity

Introduction to Cloud

2 Credits/60 Clock-Hours

Introduction to Cloud provides instruction on core cloud computing concepts, services, and solutions as well as foundational knowledge from a business value perspective of the benefits and considerations for cloud computing implementation. Included is an overview of popular cloud platforms.

Objectives:

- Define the value proposition of cloud computing.
- Identify core cloud concepts, services, solutions, and management tools.
- Demonstrate an understanding of cloud security considerations, features, and best practices.

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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

- Describe cloud identity, governance, privacy, and compliance concepts and features.
- Compare and contrast cloud pricing models and identify cost management solutions.
- Define cloud deployment models, methods, and operations.

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Security +

4 Credits/120 Clock-Hours

Security+ provides instruction on assessing the security posture of enterprise environments and implementing appropriate security solutions. Instruction is given to identify, analyze, and respond to events and incidents. This course aligns with the objectives of the CompTIA Security+ certification exam.

Objectives:

- Explain security functions and purposes as they relate to network devices.
- Identify and implement risk mitigation techniques and strategies.
- Distinguish and evaluate different network and physical security threats.
- Implement network intrusion detection and prevention technologies.
- Identify and execute appropriate cryptography measures.

Snow College

Orientation

1 Credits/30 Clock-Hours

Orientation is designed to introduce students to the program and degree pathway for the CIS department. Students will be introduced to the curriculum, pathways, and industry certifications. Students will be introduced to the learning model utilized in the department to include; online/hybrid instruction, required clock hours in class, and program outcomes. Students will learn how to utilize software platforms used in the program for learning (e.g., Canvas, NetAcad, and Packet Tracer).



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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Objectives:

- Describe the coursework, pathway, certificates, and degree.
- Describe and operate within the CIS department educational model.
- Describe the industry certifications and specialized departmental badges.
- Demonstrate proficiency with Canvas, NetAcad, and Packet Tracer.

Networking Essentials

2 Credits/60 Clock-Hours

Networking Essentials will introduce students to the importance of networking in a digital world, and introduced network essentials required in many business functions today including business critical data and operations, cybersecurity, and much more. Students will learn to install a home and small business network, develop basic network troubleshooting skills, and recognize network threats and basic mitigation techniques.

Objectives:

- Plan and install simulated home or small business networks and wireless networks.
- Verify settings and troubleshoot network connectivity.
- Identify and mitigate network security threats.

Introduction to IOT

3 Credit/90 Clock-Hours

Introduction to IOT is designed to give the student an introduction to the Internet of Things (IoT). Students will learn how these devices connect, how they expand and transform our current technology, and considerations for securing these devices. Students will also learn the basics of the IoT technology and receive a better understanding of smart devices and the role they play in the modern world technology landscape.

Objectives:

- Discuss how the current digital transformation is creating unprecedented economic opportunity.
- Describe how the IoT (Internet of Things) is bridging the gap between operational and information technology systems.
- Describe how standard business processes are being transformed.
- Identify the security concerns that must be considered when implementing IoT solutions.

Southwest Technical College

Security +

4 Credits/120 Clock-Hours

Security+ provides instruction on assessing the security posture of enterprise environments and implementing appropriate security solutions. Instruction is given to identify, analyze, and respond to events and incidents. This course aligns with the objectives of the CompTIA Security+ certification exam.

Objectives:

- Explain security functions and purposes as they relate to network devices.
- Identify and implement risk mitigation techniques and strategies.
- Distinguish and evaluate different network and physical security threats.
- Implement network intrusion detection and prevention technologies.
- Identify and execute appropriate cryptography measures.



Utah System of Higher Education

Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

IT Internship

2 Credit/90 Clock-Hours

Students will seek internship opportunities with local employers to develop IT skills related more specifically related to the company of their choosing. The instructor may advise the students of companies that have expressed an interest in student applications. Internship placement is not guaranteed.

Objectives:

- Contact industry employers for internship opportunities
- Communicate effectively with co-workers, clients and colleagues
- Apply IT skills to a specific industry

Special Projects II

2 Credits/60 Clock-Hours

Special Projects II provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.



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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Tooele Technical College

Security +

4 Credits/120 Clock-Hours

Security+ provides instruction on assessing the security posture of enterprise environments and implementing appropriate security solutions. Instruction is given to identify, analyze, and respond to events and incidents. This course aligns with the objectives of the CompTIA Security+ certification exam.

Objectives:

- Explain security functions and purposes as they relate to network devices.
- Identify and implement risk mitigation techniques and strategies.
- Distinguish and evaluate different network and physical security threats.
- Implement network intrusion detection and prevention technologies.
- Identify and execute appropriate cryptography measures.

Introduction to Cloud

2 Credits/60 Clock-Hours

Introduction to Cloud provides instruction on core cloud computing concepts, services, and solutions as well as foundational knowledge from a business value perspective of the benefits and considerations for cloud computing implementation. Included is an overview of popular cloud platforms.

Objectives:

- Define the value proposition of cloud computing.
- Identify core cloud concepts, services, solutions, and management tools.
- Demonstrate an understanding of cloud security considerations, features, and best practices.
- Describe cloud identity, governance, privacy, and compliance concepts and features.
- Compare and contrast cloud pricing models and identify cost management solutions.
- Define cloud deployment models, methods, and operations.

Introduction to Scripting

1 Credits/30 Clock-Hours

Introduction to Scripting provides instruction on basic scripting concepts. Students are introduced to scripting fundamentals to automate tasks that would otherwise be performed manually. Students explore the practical use and management of scripts to perform system administration functions.

Objectives:

- Demonstrate an understanding of the features of scripting languages.
- Implement critical thinking and problem-solving skills through practical exercises.
- Perform automation of systems tasks and functions.

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

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Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep V

1 Credit/30 Clock-Hours

Certification Test Prep V provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep VI

1 Credit/30 Clock-Hours

Certification Test Prep VI provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam



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outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Special Projects I

1 Credit/30 Clock-Hours

Special Projects I provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Special Projects II

2 Credits/60 Clock-Hours

Special Projects II provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.
- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Special Projects III

3 Credits/90 Clock-Hours

Special Projects III provides students with a unique or advanced skill development identified as a need in industry. Students will select their chosen topic from a previous course subject and draft a project proposal. After the project is completed, the student and faculty member will review the success of the project compared to the proposal. (Requires advisor approval).

Objectives:

- Apply decision-making, critical-thinking, troubleshooting, and problem-solving skills
- Create a draft proposal for a project focusing on networking, cybersecurity, or operating systems.
- Develop a project outline that defines the purpose, scope, and potential challenges they may face. Present the outline to faculty for approval.

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Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

- Demonstrate project management skills as they complete their project and work with the instructor to evaluate its success according to their purpose, scope, and outline.

Uintah Basin Technical College

Introduction to Scripting

1 Credits/30 Clock-Hours

Introduction to Scripting provides instruction on basic scripting concepts. Students are introduced to scripting fundamentals to automate tasks that would otherwise be performed manually. Students explore the practical use and management of scripts to perform system administration functions.

Objectives:

- Demonstrate an understanding of the features of scripting languages.
- Implement critical thinking and problem-solving skills through practical exercises.
- Perform automation of systems tasks and functions.

Certification Test Prep I

1 Credit/30 Clock-Hours

Certification Test Prep I provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep II

1 Credit/30 Clock-Hours

Certification Test Prep II provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep III

1 Credit/30 Clock-Hours

Certification Test Prep III provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam



Utah System of Higher Education

Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Certification Test Prep IV

1 Credit/30 Clock-Hours

Certification Test Prep IV provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep V

1 Credit/30 Clock-Hours

Certification Test Prep V provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Certification Test Prep VI

1 Credit/30 Clock-Hours

Certification Test Prep VI provides instruction in preparation for industry exams. Students will access additional testing materials and resources for their exam preparation. Students will review the exam outline, objectives, grading scale, requirements, and recommendations for the specified industry exam.

Objectives:

- Identify areas for improvement of certification learning objectives
- Demonstrate competency by passing practice tests
- Demonstrate proficiency in test-taking strategies
- Schedule and take the certification exam

Introduction to Python

2 Credits/60 Clock-Hours

Intro to Python will cover functional programming in python. Students will learn common functions, loops, operators, and conditionals. They will learn how to implement and manipulate lists, tuples, and dictionaries. They will create basic python scripts such as Fizzbuzz and text-based adventure games. This course will prepare students for further python training.

Objectives:

- Demonstrate understanding of Python functions, create custom functions.
- Demonstrate understanding of loops, and conditionals.
- Create a text-based adventure game utilizing all tools learned.



Utah System of Higher Education

Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Technical Installation

2 Credits/60 Clock-Hours

This course will focus on combining technical skills with light construction. Students will learn how to install and configure physical network infrastructure, security and door access, and smart home technologies. This course will provide instruction in the use of small construction tools including stud finders, cordless drills, saws etc. This course covers the basics of low-voltage technician skills. Students will also learn basic electronic soldering skills.

Objectives:

- Demonstrate the use of basic network and construction tools.
- Successfully install and configure smart home technologies, security devices, and network infrastructure.
- Explain basic low-voltage electrical theory.

Telecommunications

2 Credits/60 Clock-Hours

This course will focus on the telecommunications equipment that supports the backbone of the modern internet. Students will learn how to install, program, and maintain edge routers, MSPP's (MultiService Provisioning Platform), ODXC (Optical Digital Cross Connect), and other communication devices. They will also learn how to create and implement emergency power backup plans.

Objectives:

- Identify common communication cables
- Demonstrate best practices when running cables and cable management
- Program common communication devices
- Identify vulnerabilities in the network and implement security measures
- Create and implement an emergency power backup plan

Utah State University - Eastern

Introduction to Programming

3 Credit/90 Clock-Hours

This course introduces computer programming/software engineering and applications. Students learn the fundamentals of computer programming, simple controls and data structures, and operating system commands. Students learn to design, code, and test their own programs, and apply mathematical skills.

Objectives:

- Modify existing Python programs
- Write original Python programs
- Demonstrate the use of:
 - Different data types and variables
 - Decision structures such as If and If-elif-else
 - Loops structures such as While, and For
 - Functions
 - Lists, Tuples, Dictionaries and Sets
 - String manipulations
 - Files (read and write)
 - Classes and Object-Oriented Programming



Utah System of Higher Education

Information Technology

FY2023 / 20 Credits (600 Clock-Hours)

Website Design

3 Credit/90 Clock-Hours

This course focuses on design and construction of Web pages using HTML, Cascading Style Sheets, and JavaScript. Students will have hands-on experience creating and publishing web pages. This course also focuses on basics of hosting, publishing, promoting, and maintaining websites.

Objectives:

- Understand web hosting and critique website designs
- Demonstrate use of HTML5 and Cascading Style Sheets (CSS) in developing web pages
- Develop web pages using images, multimedia, tables and forms.
- Apply basic JavaScripting to web Pages
- Publish, Promote, and Maintain a website
- Evaluate and use Website Builders or Content Management Systems (CMS)

Web Business

3 Credits/90 Clock-Hours

This course is an introduction to Web-based business. Students will learn business concepts relating to on-line and world-wide e-commerce. Also marketing concepts, design strategies, and technical issues as they relate to Web-based businesses will be discussed.

Objectives:

- Review technology infrastructure of the Internet and the World Wide Web
- Understand the implications of selling on the web — regional and worldwide
- Develop marketing concepts on the web in conjunction with social media, mobile, and online auctions.
- Explain how to improve efficiency and reduce costs
- Discuss the environment of electronic commerce involving ethical, legal, and tax Issues
- Explain web server hardware and software, electronic commerce software and associated security needs
- Plan for electronic commerce including the implementation of payment systems that are commonly used

Professionalism

3 Credits/90 Clock-Hours

Professionalism explores behaviors, attitudes, and human skills essential for workplace success. Students will study how to build strong customer relations and provide outstanding customer service in a diverse workplace. Students will use professional skills to prepare for potential career opportunities.

Objectives:

- Explain the importance of human skills for success in the workplace
- Explore the foundations of a service culture and develop relationship management skills
- Demonstrate preparedness for potential career opportunities
- Practice acceptable workplace conduct, including self-management, willingness to learn, and workplace relationships



Utah System of Higher Education

Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

Medical Assistant			
Institutions: Bridgerland, Davis, Dixie, Mountainland, Ogden-Weber, Salt Lake, Snow, Southwest, Tooele, Uintah Basin, USU-E			
<i>Certificate of Program Completion (Catalog Year: 2023, 28 Credits/900 Clock-Hours Required, CIP: 51.0801)</i>			
Core (19 Credits/630 Clock-Hours)		Credits	Clock-Hours
TEMA 1010	Introduction to Medical Assisting	2	60
TEMA 1020	Medical Office I	2	60
TEMA 1030	Medical Office II	2	60
TEMA 1040	Anatomy and Physiology	4	120
TEMA 1050	Pharmacology	3	90
TEMA 1060	Clinical Procedures	2	60
TEMA 1900	Medical Assistant Externship I	2	90
TEMA 1910	Medical Assistant Externship II	2	90
Electives (9 Credits/270 Clock-Hours)			
<i>Bridgerland Technical College</i>			
TEMA 1090	Emergency Preparedness	1	30
TEMA 1110	Laboratory Procedures	3	90
TEMA 1510	Specialty Exams and Procedures	3	90
TEMA 1400	Workplace Readiness	1	30
TEMA 1070	Medical Terminology	1	30
<i>Davis Technical College</i>			
TEMA 1080	Medical Terminology	2	60
TEMA 1310	Specialty Procedures	3	90
TEMA 1120	Laboratory Procedures and Emergencies	4	120
<i>Dixie Technical College</i>			
TEMA 1320	Clinical Procedures II	4	120
TEMA 1330	Clinical Procedures III	3	90
TEMA 1085	Medical Terminology	2	60
<i>Mountainland Technical College</i>			
TEMA 1130	Intermediate Lab I	2	60
TEMA 1140	Advanced Lab II	3	90
TEMA 1520	Specialty Patient Care and Treatment	2	60
TEMA 1530	Specialty Exams and Office Management	2	60
<i>Ogden-Weber Technical College</i>			
TEMC 1080	Medical Terminology	2	60
TEMA 1340	Clinical Specialty Procedures	3	90
TEMA 1350	Clinical Laboratory Procedures	4	120
<i>Salt Lake Community College</i>			
TEMA 1080	Medical Terminology	2	60
TEMA 1150	Medical Assistant Laboratory Procedures	2	60
TEMA 1210	Assisting with Medical Specialties I	2	60
TEMA 1220	Assisting with Medical Specialties II	2	60
TEMA 1410	Workplace Preparation	1	30
<i>Snow College</i>			
TEMA 1080	Medical Terminology	2	60
TEMA 1540	Patient Care	2	60
TEMA 1160	Laboratory and Surgical Procedures	2	60
TEMA 1600	Health and Wellness	2	60

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Medical Assistant

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TEMA 1420	The Medical Assistant	1	30
Southwest Technical College			
TEMA 1080	Medical Terminology	2	60
TEMA 1230	Medical Assisting Procedures I	2	60
TEMA 1240	Medical Assisting Procedures II	2	60
TEMA 1250	Medical Assisting Lab Procedures	3	90
Tooele Technical College			
TEMA 1070	Medical Terminology	1	30
TEMA 1170	Medical Procedures I	2	60
TEMA 1550	Medical Specialties I	2	60
TEMA 1180	Medical Procedures II	1	30
TEMA 1560	Medical Specialties II	2	60
TEMA 1430	Employment Skills and Strategies	1	30
Uintah Basin Technical College			
TEMA 1080	Medical Terminology	2	60
TEMA 1260	Medical Assisting Lab Procedures	2	60
TEMA 1270	Medical Assisting Specialty Procedures I	2	60
TEMA 1280	Medical Assisting Specialty Procedures II	2	60
TEMA 1440	Prepare for the Workplace	1	30
Utah State University - Eastern			
TEMA 1095	Emergency First Response	3	90
TEMA 1080	Medical Terminology	2	60
TEMA 1700	Phlebotomy I	2	60
TEMA 1710	Phlebotomy II	1	30
TEMA 1450	Preparation for Workforce Entry	1	30



Utah System of Higher Education

Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

PROGRAM DESCRIPTION

Medical assistants are multi-skilled, allied health care professionals responsible for various clinical and/or administrative duties and are an essential part of a healthcare team. This program is designed to prepare students for entry-level positions that will allow them to learn and move into higher-level job opportunities by working with physicians and providers in office settings. Students in this program learn cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains by focusing on administrative and back office clinical skills. Upon successful completion of all required courses, students participate in an externship in a medical office. Graduates of the program are eligible to take a national certification exam.

Objectives:

- Demonstrate competent patient care of a medical assistant in ambulatory healthcare facilities.
- Exhibit basic skills of a medical assistant including: obtaining vital signs, phlebotomy, pharmacology, EKG, and assisting providers with specialty examinations.
- Perform accurate medical documentation, patient education instruction, communication, and apply critical thinking skills in both simulated and clinical settings.
- Describe the areas of general, clinical, and administrative medical assisting.
- Demonstrate competencies and skills in preparation for taking a medical assistant national certification examination.

COURSE DESCRIPTIONS

Introduction to Medical Assisting

2 Credit/60 Clock-Hours

The Introduction to Medical Assisting course provides an overview of healthcare professions and their roles in the healthcare environment. Students will be guided through legal concepts and ethical issues in the healthcare setting which will compare and contrast moral issues, professional, and personal ethics. The foundational principles of professional and effective interpersonal communication techniques will be discussed.

Objectives:

- Describe allied health professionals, their various scopes of practice, and their roles as a member in the healthcare industry.
- Apply legal and ethical standards in healthcare.
- Demonstrate workplace professionalism and communication.

Medical Office I

2 Credit/60 Clock-Hours

The Medical Office I course introduces administrative and general duties in a medical office. These duties include appointment scheduling, records management, electronic health records use and management, written communications, health insurance, office equipment and management, as well as telephone procedures. This course will provide hands-on practice of administrative skills and competency-based examinations.

Objectives:

- Demonstrate professionalism and responsibilities of the medical assistant through written, verbal, and electronic communication.
- Describe the administrative functions of a medical office.
- Demonstrate correct documentation in a medical record.

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Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

- Define types of information contained in a patient's medical record.

Medical Office II

2 Credit/60 Clock-Hours

The Medical Office II course introduces students to the management of all aspects of medical office finances. Instruction includes diagnostic and procedural coding for insurance billing. Students will track claims reimbursement, process patient statements, and review fee collection processes.

Objectives:

- Describe how to use procedural, diagnostic, and HCPCS coding required for insurance paperwork.
- Demonstrate professionalism in handling patient accounts and medical records.
- Describe banking and accounting procedures as related to the ambulatory care setting.
- Define healthcare insurance types, utilization, and guidelines.

Anatomy and Physiology

4 Credit/120 Clock-Hours

The Anatomy and Physiology course is designed to familiarize the student with the plan and structure of the human body, its function under normal, healthy conditions, and an introduction to the body's response to illness and disease. Instruction covers an overview of all organ systems, including diagnostic treatment modalities. Medical terms as they relate to the body and correct spelling and pronunciation are taught.

Objectives:

- Locate and label major organs and structures in the body systems.
- Identify and state the function of the major anatomical components of the human body.
- Describe common disorders associated with each major anatomical component.
- Identify common pathology related to each body system.

Pharmacology

3 Credit/90 Clock-Hours

The Pharmacology course familiarizes the student with pharmaceuticals. Instruction includes commonly prescribed medications, trade and generic names, mode of action, side effects, and usual doses. Concepts covered include the proper administration of oral, injectable, and non-injectable medications. There will be a review of the math skills required to perform medical math conversions and dosage calculations.

Objectives:

- Demonstrate calculation of basic mathematical concepts and units of measurement as related to the ambulatory care setting.
- Describe commonly prescribed medications: uses, names, classifications, and risks.
- List and explain the rights of medication administration.
- Identify and interpret common medication abbreviations.
- Demonstrate the proper handling and administration of prescriptions and medications.

Clinical Procedures

2 Credit/60 Clock-Hours

The Clinical Procedures course is an introduction to working in an ambulatory outpatient clinic setting, understanding the role of a medical assistant and patient care. The content of this course will focus on infection control, medical asepsis, taking patient histories, performing patient assessments including vital signs, and preparing for and assisting the provider with examinations.



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Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

Objectives:

- Identify how infectious and communicable diseases and transmissions relate to the healthcare setting per federal, state, and local health laws regulations and recommendations.
- Explain the purpose of obtaining patient's health information and how to elicit different aspects of the chief medical complaint.
- Accurately identify, measure, and record vital signs.
- Define the normal ranges and values for each vital sign.
- Interpret the medical assistant's role in preparing and assisting in the physical exam.

Medical Assistant Externship I

2 Credit/90 Clock-Hours

The Medical Assistant Externship I course allows the medical assistant student the opportunity to demonstrate their administrative and clinical skills in a healthcare setting. This externship takes place in a working medical office or clinic under the supervision of a licensed provider.

Objectives:

- Demonstrate competency of skills learned in the classroom and lab in the ambulatory healthcare setting.
- Work effectively in diverse workplace environments.
- Acquire additional interpersonal communication and interaction skills.
- Successfully complete required externship hours in an ambulatory healthcare setting.

Medical Assistant Externship II

2 Credit/90 Clock-Hours

The Medical Assistant Externship II course allows the medical assistant student the opportunity to demonstrate their administrative and clinical skills in a healthcare setting. This externship takes place in a working medical office or clinic under the supervision of a licensed provider.

Objectives:

- Demonstrate competency of skills learned in the classroom and lab in the ambulatory healthcare setting.
- Work effectively in diverse workplace environments.
- Acquire additional interpersonal communication and interaction skills.
- Successfully complete required externship hours in an ambulatory healthcare setting.

NON-ALIGNED (ELECTIVE) COURSES

Bridgerland Technical College

Emergency Preparedness

1 Credit/30 Clock-Hours

Emergency Preparedness is designed to assist the medical assisting student in developing and gaining the knowledge and skills needed for safe and effective care of patients, community members, family members, and themselves in a variety of emergency situations.

Objectives:

- List principles and steps of CPR.
- Demonstrate basic principles of first aid.
- Identify safety issues in a healthcare environment.
- Describe fundamental principles for evacuation of a healthcare setting.
- Discuss critical elements of an emergency plan for response to a natural disaster or other emergency.

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Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

- Discuss proper use of a fire extinguisher.

Laboratory Procedures

3 Credit/90 Clock-Hours

Laboratory Procedures will provide the student with the skills necessary to perform infection control, assist in diagnostic testing, maintain laboratory equipment, perform laboratory safety procedures, and the collection and testing of laboratory specimens.

Objectives:

- Perform federal, state, and local laboratory regulations, as well as quality control/assurance measures.
- Focus on Clinical Laboratory Improvement Amendment (CLIA) waived tests.
- Identify and distinguish between normal and abnormal results for common laboratory testing.
- Identify and perform appropriate venipuncture techniques using applicable equipment.

Specialty Exams and Procedures

3 Credit/90 Clock-Hours

Specialty Exams and Procedures will provide the student with the skills necessary to perform and assist with diagnostic testing and minor surgical procedures, knowing basic surgical instruments, maintaining clinical equipment and assisting with specialty exams.

Objectives:

- Define the medical assistant's role in preparing and assisting in specialty exams.
- Distinguish between specialty exams.
- Identify equipment needed for specialty exams.
- Educate patients in preparation for exams and procedures.

Workplace Readiness

1 Credit/30 Clock-Hours

Workplace Readiness prepares students for future employment by continuing to develop the verbal and written communication skills needed for success in the workplace. This course also helps students gain critical thinking and professional skills that are needed for employer satisfaction.

Objectives:

- Prepare cover and thank you letters.
- Create a resume.
- Participate in a mock interview.
- Demonstrate knowledge of skills required to enter the workplace.

Medical Terminology

1 Credit/30 Clock-Hours

The Medical Terminology course will teach the basic structure of medical words. Emphasis is placed on the correct spelling and pronunciation of prefixes, suffixes, and root words. Students learn how to interpret and understand the meaning and how to effectively apply this knowledge in the language of medicine.

Objectives:

- Identify the various types of word parts that are used to form medical terms.
- Demonstrate the correct pronunciation of medical terms.
- Identify proper deconstruction of complex medical terms to interpret the meaning of each element.

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Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

Davis Technical College

Medical Terminology

2 Credit/60 Clock-Hours

Medical Terminology provides instruction on how to interpret and understand the technical language of medicine. Students learn the basic structure of medical terms including prefixes, suffixes, word roots, special endings, plural forms, abbreviations, and symbols. Emphasis is placed on the correct spelling, definition, application, and pronunciation of each term.

Objectives:

- Identify the four types of word parts in forming medical terms.
- Demonstrate construction of medical terms by correctly spelling, pronouncing, defining, and identifying selected terms.
- Identify and apply acceptable medical abbreviations.
- Use knowledge of word parts to define unfamiliar medical terms.

Specialty Procedures

3 Credit/90 Clock-Hours

Specialty Procedures is an introduction to specialty outpatient clinic settings. Throughout this course, students will be introduced to the equipment and supplies needed for different types of specialty examinations, as well as how to prepare patients for them. In this course, students will conduct the steps necessary for performing tests while in a medical office. This includes studying the different types of tests that can be performed in a physician's office laboratory, the different supplies and procedures associated with each type of test, and the steps for specimen collection. Students will learn how to respond in an emergency situation, including studying CPR and First Aid.

Objectives:

- Interpret the medical assistant's role in preparing and assisting in specialty exams.
- Recognize non-verbal cues from the patient and respond accordingly.
- Explain the purpose and rationale behind diagnostic screening tools.
- Demonstrate professionalism when giving patient education and instruction.

Laboratory Procedures and Emergencies

4 Credit/120 Clock-Hours

In Laboratory Procedures and Emergencies, students will conduct the steps necessary for performing tests while in a medical office. This includes studying the different types of tests that can be performed in a physician's office laboratory, the different supplies and procedures associated with each type of test, and the steps for specimen collection. Students will learn how to respond in an emergency situation, including studying CPR and First Aid. Students will update a resume and prepare a cover letter for future practicum and job.

Objectives:

- Perform venipuncture, capillary puncture, and IV insertion.
- Differentiate between normal and abnormal test results.
- Recognize and respond to medical office emergencies.
- List principles and steps for CPR.
- Compose a resume and cover letter.



Utah System of Higher Education

Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

Dixie Technical College

Clinical Procedures II

4 Credit/120 Clock-Hours

This course focuses on working in an ambulatory outpatient clinic setting and understanding the role of the medical assistant in patient care. The content of this course will focus on specialty examinations and procedures including pediatric and OB/GYN, diagnostic testing, laboratory procedures and safety, patient education as it relates to nutrition and mental health and correctly performing ECG's.

Objectives:

- Identify and distinguish between specialty exams, the equipment needed for the specialty exams, and educating patients in preparing for specialty exams.
- Identify and determine normal and abnormal ranges for pediatric vital signs, immunization procedures, immunization schedules,
- Perform federal, state, and local laboratory regulations, as well as quality control/assurance measures. --Identify and distinguish between normal and abnormal results for common laboratory testing and specialty laboratory equipment.
- Demonstrate proficiency in all skills objectives.
- Perform an ECG and identify any potential artifacts

Clinical Procedures III

3 Credit/90 Clock-Hours

This course continues instruction pertaining to the medical assistant's role in an ambulatory outpatient clinic setting and preparation for future employment. The content of this course will focus on blood collection procedures, assisting with surgical procedures, patient education, first aid, and emergency patient care.

Objectives:

- Manage emergencies in the medical office
- Perform first aid in accidents, injuries, and acute illnesses
- Identify and perform appropriate blood collection techniques using applicable equipment
- Identify and assist with appropriate surgical procedures using applicable equipment
- Write a resume, cover letter and follow-up letter

Medical Terminology

2 Credit/60 Clock-Hours

This course will provide a study of the medical language for use in a health career setting for learners with little or no previous experience. This course presents a study of basic medical terminology including prefixes, suffixes, word roots, combining forms, special endings, plural forms, abbreviations, and symbols. Emphasis is placed on spelling, definition, usage, and pronunciation.

Objectives:

- Identify the four types of word parts in forming terms.
- Pronounce medical terms correctly.
- Construct medical terms from the four types of word parts.
- Recognize the importance of spelling medical terms correctly.
- Identify and apply acceptable abbreviations.



Utah System of Higher Education

Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

Mountainland Technical College

Intermediate Lab I

2 Credit/60 Clock-Hours

The Intermediate Lab I course is designed to help the medical assisting student understand the importance of and respond to office emergencies and properly perform routine procedures in the medical office.

Objectives:

- Demonstrate visual, auditory exams.
- Successfully perform capillary punctures and their corresponding tests.
- Demonstrate medical assisting skills as pertaining to assisting with minor surgery.
- Describe and demonstrate proper actions for emergencies in the office. For example: first aid, bandaging, CPR, developing emergency plans, hypothermia, choking.
- Explain the different types of rehabilitation procedures and proper mechanics.

Advanced Lab II

3 Credit/90 Clock-Hours

In the Advanced Lab II course the student will learn advanced skills needed in the physician office laboratory. These include: respiratory procedures, laboratory safety measures, venipuncture, basic diagnostic testing, ECG's and Holter monitoring, and preparing for minor surgical assisting.

Objectives:

- Perform respiratory testing including spirometry, peak flow meter, and nebulizer.
- Identify and comply with safety regulations in the office lab.
- Identify venous vasculature and perform venipuncture for the collection of patient specimens using the appropriate collection methods and equipment.
- Perform basic homological testing including hemoglobin, hematocrit, blood glucose, erythrocyte sedimentation rate, cholesterol, A1C, mono testing and PKU screening.
- Perform and ECG and troubleshoot potential artifacts.
- Prepare a sterile field, perform a surgical hand scrub and sterile gloving and prepare the patient's skin for a minor surgical procedure.

Specialty Patient Care and Treatment

2 Credit/60 Clock-Hours

In the Specialty Patient Care and Treatment course the student will learn about and perform procedures directed at specific types of patient examinations. These include proctological exams, OB/GYN exams, pediatric exams and collecting and processing specimens collected during these exams. Additionally, medical assisting students will learn the basics in preparing for IV placement.

Objectives:

- Practice the proper placement and care of an IV catheter.
- Demonstrate how to assist with flexible sigmoidoscopy including care of the scope.
- Identify the types of gynecological exams, types of specimens collected and the proper assisting techniques.
- Perform basic pediatric exams including head circumference, chest circumference, pediatric vitals, and filling out a growth chart.
- Identify pediatric vaccination schedules, and perform pediatric vision screening.
- Perform basic diagnostic testing including urine collection and examination, pregnancy, occult blood, fecal, sputum, throat culture and rapid strep testing.



Utah System of Higher Education

Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

Specialty Exams and Office Management

2 Credit/60 Clock-Hours

The Specialty Exams and Office Management course is designed to introduce the student to the basic care and treatment of geriatric patients and issues that arise from aging, and understanding and assisting patients dealing with mental health issues. Additional topics include the specialty of radiology testing and how it assists with diagnosing patients, and nutrition and exercise and its effects on the overall health of a patient. Students will also learn about the importance of practicum experience and how to manage a medical office.

Objectives:

- Identify geriatric exams and specific practices that must be followed to keep a geriatric patient safe, and understand issues unique to aging and care of aging patients.
- Exhibit an understanding of mental health issues and the effect they have on patient health and care and understand the medical assistant's role in treatment options related to suicide, substance abuse and mental disorders.
- Identify specific radiological procedures and how they assist with the diagnosing and treatment of patients.
- Identify the components of a healthy lifestyle and assist patients in learning about lifestyle changes and dietary needs when it comes to the disease process.
- Understand the purpose of the practicum and the steps needed to complete one successfully.
- Identify the fundamentals of employee and facility management in a medical office.

Ogden-Weber Technical College

Medical Terminology

2 Credit/60 Clock-Hours

This course will provide an instruction on how to interpret and understand medical language as well as the basic structure of medical words. Additionally, this course will explore interpretations of medical abbreviations for those seeking a career in medicine.

Objectives:

- Identify the role of the four main types of word parts that make up medical terms.
- Use knowledge of word parts to define unfamiliar medical words.
- Describe steps to locate medical words using either a medical dictionary or an online resource.
- Define commonly used word parts, medical terms, and abbreviations.
- Recognize the importance of spelling medical terms correctly.

Clinical Specialty Procedures

3 Credit/90 Clock-Hours

Clinical Specialty Procedures expands on the concepts of Clinical Procedures. This course focuses on working in an ambulatory outpatient clinic setting and understanding the role of the medical assistant in patient care. The content of this course will focus on specialty examinations and procedures, diagnostic testing, laboratory procedures and safety.

Objectives:

- Identify and distinguish between specialty exams, the equipment needed for the specialty exams, and educating patient in preparing for specialty exams.
- Identify and determine normal and abnormal ranges for pediatric vital signs, immunization procedures, immunization schedules, federal, state, and local laboratory regulations, as well as quality control/assurance measures.

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Utah System of Higher Education

Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

- Identify and distinguish between normal and abnormal results for common laboratory testing and specialty laboratory equipment.
- Demonstrate proficiency in all skills objectives.

Clinical Laboratory and Patient Care Procedures

4 Credit/120 Clock-Hours

Clinical Laboratory and Patient Care Procedures continues instruction pertaining to the medical assistant's role in an ambulatory outpatient clinic setting and preparation for future employment. The content of this course will focus on specialty procedures, laboratory tests and procedures, patient education, rehabilitation, first aid, and emergency patient care.

Objectives:

- Identify and perform appropriate blood collection techniques using applicable equipment.
- Identify and distinguish between cardiac testing procedures, monitoring, and technical equipment.
- Identify and assist with appropriate surgical procedures using applicable equipment.
- Identify, perform, and recommend laboratory testing.
- Identify routine health screenings/procedures that are recommended based on patients' age and health status.
- Write a resume, cover letter, and follow-up letter.
- Identify and use appropriate equipment in emergency situations as it pertains to the emergency at hand including wound care and first aid procedures.
- Provide patient education as it relates to rehabilitation, procedures, and nutritional recommendations.
- Demonstrate proficiency in all skill objectives.

Salt Lake Community College

Medical Terminology

2 Credit/60 Clock-Hours

Medical Terminology provides instruction on how to interpret and understand the technical language of medicine. Students learn the basic structure of medical terms including prefixes, suffixes, word roots, special endings, plural forms, abbreviations, and symbols. Emphasis is placed on the correct spelling, definition, application, and pronunciation of each term.

Objectives:

- Identify the four types of word parts in forming medical terms.
- Demonstrate construction of medical terms by correctly spelling, pronouncing, defining, and identifying selected terms.
- Identify and apply acceptable medical abbreviations.
- Use knowledge of word parts to define unfamiliar medical terms.

Medical Assistant Laboratory Procedures

2 Credit/60 Clock-Hours

Medical Assistant Laboratory Procedures provides instruction in phlebotomy theory and skill performance; basic concepts, safety and procedures of the clinical lab; specimen handling; performance of CLIA waived hematology/serology, microbiology, and urinalysis testing.

Objectives:

- Differentiate the anatomy of venous structures essential in phlebotomy
- Recognize legal aspects of phlebotomy

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Utah System of Higher Education

Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

- Distinguish equipment and supplies used to obtain blood samples
- Successfully perform technically correct and safe venipuncture using vacutainer butterfly, and syringe techniques
- Utilize basic concepts of clinical lab equipment and procedures
- Practice clinical laboratory safety and QC procedures
- Interpret and demonstrate CLIA waived testing in hematology, serology, microbiology, and urinalysis

Assisting with Medical Specialties I

2 Credit/60 Clock-Hours

Assisting with Medical Specialties I provides concepts in nutrition and medical assisting skills for the specialty areas of minor surgery, ophthalmology, otolaryngology, dermatology, allergy and infectious disease, physical medicine/rehabilitation as well as geriatrics and pediatrics.

Objectives:

- Describe the roles of various nutrient components in the daily diet
- Describe common surgical instruments, minor surgical procedures, and techniques used to assist the physician with minor surgical procedures, and methods to maintain surgical asepsis
- Demonstrate the medical assisting skills as they relate to ophthalmology, dermatology, allergy and immunology
- Interpret special considerations and demonstrate skills of healthcare professionals as they relate to pediatrics and geriatrics

Assisting with Medical Specialties II

2 Credit/60 Clock-Hours

Assisting with Medical Specialties II provides concepts of medical assisting skills for the specialty areas of gastroenterology, urology, obstetrics/gynecology, orthopedics, neurology, endocrinology, pulmonology, cardiology, and ECG.

Objectives:

- Demonstrate the medical assisting skills as they relate to the specialty areas of gastroenterology, urology, obstetrics/gynecology, orthopedics, neurology, endocrinology, pulmonology, and cardiology
- Demonstrate proper techniques for obtaining an ECG, and critique for heart function and electrocardiograph quality.

Workplace Preparation

1 Credit/30 Clock-Hours

Workplace Preparation provides instruction on necessary certifications and preparation to enter the healthcare workforce including First Aid, CPR, application for employment, and preparation for final exam.

Objectives:

- Demonstrate first aid techniques
- Demonstrate Healthcare Provider level CPR as defined by the American Heart Association
- Identify and explain personal employment qualifications
- Assemble documents needed as part of the job application process.
- Apply knowledge gained throughout training program for successful completion of final exam



Utah System of Higher Education

Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

Snow College

Medical Terminology

2 Credit/60 Clock-Hours

Medical Terminology provides instruction on how to interpret and understand the technical language of medicine. Students learn the basic structure of medical terms including prefixes, suffixes, word roots, special endings, plural forms, abbreviations, and symbols. Emphasis is placed on the correct spelling, definition, application, and pronunciation of each term.

Objectives:

- Identify the four types of word parts in forming medical terms.
- Demonstrate construction of medical terms by correctly spelling, pronouncing, defining, and identifying selected terms.
- Identify and apply acceptable medical abbreviations.
- Use knowledge of word parts to define unfamiliar medical terms.

Patient Care

2 Credit/60 Clock-Hours

This course will teach students to properly assist a provider and prepare a patient for an exam and small surgeries. Exams included are specialty, OB/GYN, and pediatric examinations and procedures. The basics about radiology and safety will be covered in this course as well as setting up a room for minor surgeries.

Objectives:

- Properly assisting a physician and prepare a patient for different types of exams
- Differentiate between types of radiologic procedures used to diagnose a patient.
- Discuss the importance of infection control when preparing for minor surgery.

Laboratory and Surgical Procedures

2 Credit/60 Clock-Hours

This course will cover the proper way for diagnostic testing and gathering samples. Some of the samples included are, sputum, blood, urine, bowel, throat, skin and several other. Safety around bodily fluids will be empathized. The proper way to run the tests and reading the results for samples collected will be covered. Assisting with minor surgeries will be covered in this chapter as well.

Objectives:

- Properly gather samples for tests ordered from the doctor.
- Demonstrate safety procedures around blood.
- Properly conduct diagnostic tests and read the results.
- Demonstrate how to properly assist a physician on a minor surgery.

Health and Wellness

2 Credit/60 Clock-Hours

The knowledge of geriatric patients and how they affect the medical field will be covered. Mental health will be addressed and different ways to cope with different stresses will be covered. The importance of cardiac procedures and how to competently perform several cardiac procedures will be included. Students will learn how to respond to medical emergencies and how to properly bandage a patient. Rehabilitation will be taught and the importance of nutrition and healthy living for patients and workers is important.



Utah System of Higher Education

Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

Objectives:

- Discuss why the geriatric field is so important in the medical field.
- Identify the concepts of mental health and demonstrate how they can get help for self or others.
- Demonstrate how to respond to medical emergencies and competently pass CPR
- Demonstrate proper technique for bandaging.
- Demonstrate the importance of a healthy lifestyle.

The Medical Assistant

1 Credit/30 Clock-Hours

This course will prepare a medical assistant to enter the work field and being ready to apply for jobs and complete interviews. Learning to put together a resume and learning vital interview skills will be covered. Job responsibilities for a medical assistant will be covered and what their role is in those responsibilities.

Objectives:

- Complete a resume and cover letter.
- Demonstrate professional appearance in an interview setting.
- Demonstrate effective office management skills.

Southwest Technical College

Medical Terminology

2 Credit/60 Clock-Hours

Medical Terminology provides instruction on how to interpret and understand the technical language of medicine. Students learn the basic structure of medical terms including prefixes, suffixes, word roots, special endings, plural forms, abbreviations, and symbols. Emphasis is placed on the correct spelling, definition, application, and pronunciation of each term.

Objectives:

- Identify the four types of word parts in forming medical terms.
- Demonstrate construction of medical terms by correctly spelling, pronouncing, defining, and identifying selected terms.
- Identify and apply acceptable medical abbreviations.
- Use knowledge of word parts to define unfamiliar medical terms.

Medical Assisting Procedures I

2 Credit/60 Clock-Hours

Medical Assisting Procedures I will focus on medical emergencies, rehabilitation, specialty exams, and healthy living. Concepts covered include BLS, proper application of bandages, wound care, pediatric, mental health, OB/GYN, patient education of mobility equipment, and healthy nutrition and lifestyles.

Objectives:

- Manage emergencies in the medical office
- Perform first aid in accidents, injuries, and acute illnesses.
- Educate patients regarding proper diet and nutrition guidelines.
- Demonstrate the use of different mobility equipment.
- Demonstrate proper measurements of pediatric patients.

Medical Assisting Procedures II

2 Credit/60 Clock-Hours

Medical Assisting Procedures II explores more advanced topics in the ambulatory care setting such as EKG, radiology procedures, and surgical assisting for in-office procedures. The content will focus on the

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Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

sterile aspect of in-office surgical procedures. In the skills portion, you will learn the practical application of the procedures and topics presented.

Objectives:

- Identify skills needed for procedures in areas such as: radiology, cardiac, and minor office surgeries.
- Define the correct steps for specialty procedures in radiology, cardiac and minor office surgeries.
- Demonstrate appropriate steps to safely assist with minor office surgeries.

Medical Assisting Lab Procedures

3 Credit/90 Clock-Hours

Medical Assisting Lab Procedures explores the physician's office laboratory (POL). The student will learn appropriate specimen collection, processing, and testing procedures. They will focus on Clinical Laboratory Improvement Amendment (CLIA) waived tests. In the skills portion, they will learn the practical application of the procedures and topics presented. Employment readiness will be addressed as the student constructs documentation for job applications.

Objectives:

- Identify appropriate CLIA waived tests used in the POL.
- Determine appropriate specimen collection, processing, and testing procedures.
- Identify proper disposal of biohazardous materials in the POL
- Define federal, state, and local health regulations as they relate to the POL
- Recognize the appropriate use of standard precautions when practicing in the POL
- Summarize the steps and rationale for Quality Control.
- Describe proper delivery of patient education in a simulated scenario.
- Explore necessary preparation for employment as a Medical Assistant.

Tooele Technical College

Medical Terminology

1 Credit/30 Clock-Hours

The Medical Terminology course will teach the basic structure of medical words. Emphasis is placed on the correct spelling and pronunciation of prefixes, suffixes, and root words. Students learn how to interpret and understand the meaning and how to effectively apply this knowledge in the language of medicine.

Objectives:

- Identify the various types of word parts that are used to form medical terms.
- Demonstrate the correct pronunciation of medical terms.
- Identify proper deconstruction of complex medical terms to interpret the meaning of each element.

Medical Procedures I

2 Credit/60 Clock-Hours

The Medical Procedures I course introduces students to the clinical laboratory and the processes of laboratory testing. Students will practice various methods of capillary and venous blood collection, as well as proper specimen collection technique for several lab tests. Concepts included are the analysis of urine, microbiology and immunology. Tests results will be compared to normal value ranges and students will learn the importance of critical value test results. The difference between bacteria and viruses and the characteristics associated with them will be discussed.

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Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

Objectives:

- Identify proper equipment and demonstrate various techniques of blood collection through capillary puncture and venipuncture methods
- Identify quality assurance practices and discuss quality control guidelines
- Memorize correct order of tube draw
- Prepare patient specimens for use with the microscope and centrifuge
- Understand the importance of using two patient identifiers in labeling patient specimens
- Proper collection, handling, and transport of patient specimens
- Utilize basic concepts of clinical lab equipment and procedures
- Interpret and demonstrate CLIA waived testing in hematology, serology, microbiology, and urinalysis

Medical Specialties I

2 Credit/60 Clock-Hours

The Medical Specialties I course provides concepts in nutrition and medical assisting skills for the specialty areas of cardiology and EKGs, ophthalmology and otolaryngology, dermatology, allergy and infectious disease, gastroenterology, orthopedics and rheumatology, and neurology.

Objectives:

- Describe the roles of various nutrient components in the daily diet
- Demonstrate the medical assisting skills as they relate to the specialty areas of cardiology and electrocardiography, ophthalmology and otolaryngology, dermatology, allergy and infectious disease, gastroenterology, orthopedics and rheumatology, and neurology
- Demonstrate proper techniques for obtaining an ECG

Medical Procedures II

1 Credit/30 Clock-Hours

The Medical Procedures II course provides emergency preparedness basics and students will learn safety and survival techniques for various scenarios. Students will acquire their American Heart Association Healthcare Provider (BLS) CPR certification. Students will be introduced to common medical supplies and surgical instruments, as well as assisting with minor surgical procedures and maintaining surgical asepsis.

Objectives:

- Recognize and explain first aid procedures for medical, injury, and environmental emergencies
- Demonstrate proper compression rates and technique, rescue breathing, and comprehension and use of the AED for infants, adolescents, and adults
- Identify common surgical instruments
- Demonstrate proper technique for sterilization of instruments

Medical Specialties II

2 Credit/60 Clock-Hours

The Medical Specialties II course explores the different behavioral health disorders, including the etiology, signs, symptoms, diagnostic procedures, and treatments. It also provides medical assisting skills for the specialty areas of endocrinology, pulmonology, urology, reproduction, obstetrics and gynecology, pediatrics, geriatrics, radiology and nuclear medicine, and cancer medicine (oncology)

Objectives:

- Describe how a medical assistant should assist with a mental or behavioral health examination

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Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

- Demonstrate the medical assisting skills as they relate to the specialty areas of endocrinology, pulmonology, urology, reproduction, obstetrics and gynecology, pediatrics, geriatrics, radiology and nuclear medicine, and cancer medicine (oncology)
- Interpret special considerations and demonstrate skills of healthcare professionals as they relate to pediatrics and geriatrics
- Identify diagnostic techniques, x-ray views and patient positions used in x-ray examinations
- Recognize terms related to the causes, diagnosis, and treatment of cancer

Employment Skills and Strategies

1 Credit/30 Clock-Hours

The Employment Skills and Strategies course is designed to assist students in their journey from the classroom to the workplace. Students will be introduced to the soft skills that are highly desired in today's workplace and they will learn to identify their own unique qualities and learn ways to strengthen them by tracking their habits and setting goals. By the end of the course students will be able to recognize their own strengths and weaknesses, and know how to better engage and develop excellent employee skill sets that will guide them to success in their chosen career field. They will learn to design an effective resume and cover letter and learn essential interview techniques and strategies. Participating in a mock interview will provide invaluable feedback and advice to solidify the student's confidence in achieving their professional goals.

Objectives:

- Self-Management: attitude, goal setting, life management, time and stress management and organization skills, etiquette/dress
- Workplace Basics: ethics, politics, diversity, accountability and workplace relationships, quality organizations and service, human resources and policies
- Relationships: communication, electronic communications, motivation, leadership and teams, conflict and negotiation
- Learn skills to create a personalized and exemplary resume and cover letter.

Uintah Basin Technical College

Medical Terminology

2 Credit/60 Clock-Hours

Medical Terminology provides instruction on how to interpret and understand the technical language of medicine. Students learn the basic structure of medical terms including prefixes, suffixes, word roots, special endings, plural forms, abbreviations, and symbols. Emphasis is placed on the correct spelling, definition, application, and pronunciation of each term.

Objectives:

- Identify the four types of word parts in forming medical terms.
- Demonstrate construction of medical terms by correctly spelling, pronouncing, defining, and identifying selected terms.
- Identify and apply acceptable medical abbreviations.
- Use knowledge of word parts to define unfamiliar medical terms.

Medical Assisting Lab Procedures

2 Credit/60 Clock-Hours

This course provides instruction in phlebotomy theory and skills performance: basic concepts, safety and procedures of the clinical lab: specimen handling: CLIA waived hematology/serology, microbiology and urinalysis testing.

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Utah System of Higher Education

Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

Objectives:

- Differentiate the anatomy of venous structures essential in phlebotomy.
- Recognize legal aspects of phlebotomy.
- Distinguish equipment and supplies used in phlebotomy
- Successfully perform technically correct and safe venipuncture using butterfly, vacutainer, and syringe.
- Practice clinical laboratory safety and QC procedures.
- Interpret and demonstrate CLIA waived testing in hematology, serology, microbiology, and urinalysis.
- Utilize basic concepts of clinical lab equipment/procedures.

Medical Assisting Specialty Procedures I

2 Credit/60 Clock-Hours

This course provides concepts in nutrition and medical assisting skills for the specialty areas of minor surgery, ophthalmology, otolaryngology, dermatology, allergy and infectious disease, Physical rehab as well as geriatrics and pediatrics.

Objectives:

- Describe the roles of various nutrient components in the daily diet.
- Describe common surgical instruments, minor surgical procedures, and techniques used to assist the physician with minor surgical procedures, and methods to maintain surgical asepsis.
- Demonstrate the medical assisting skills as they relate to ophthalmology, dermatology, allergy, and immunology.
- Interpret special considerations and demonstrate skills of healthcare professionals as they relate to pediatrics and geriatrics.

Medical Assisting Specialty Procedures II

2 Credit/60 Clock-Hours

This course provides concepts of medical assisting for the specialty areas of gastroenterology, urology, obstetrics/gynecology, orthopedics, neurology, endocrinology, pulmonology, cardiology and ECG.

Objectives:

- Demonstrate the medical assisting skills as they relate to the specialty areas of gastroenterology, urology, obstetrics/gynecology, orthopedics, neurology, endocrinology, pulmonology, and cardiology.
- Demonstrate proper techniques for obtaining an ECG, and critique for heart function and electrocardiograph quality.

Prepare for the Workplace

1 Credit/30 Clock-Hours

This course provides instruction on the necessary certifications and preparation to enter the healthcare workforce including First Aid, CPR, application for employment and preparation for final exam and national certifications.

Objectives:

- Demonstrate First Aid Techniques.
- Demonstrate Healthcare Provider Level CPR as defined by the American Heart Association.
- Identify and explain personal employment qualifications.
- Assemble documents needed as part of the job application process.

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Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

- Apply knowledge of anatomy, physiology, medical terminology, clinical, and administrative medical assisting procedures using certification practice exams.
- Keyboarding skills at 40 WPM or greater.

Utah State University

Emergency First Response

3 Credits/90 Clock-Hours

Emergency First Response is a course designed to help the student master the skills and concepts necessary to become an Emergency Medical Responder. An EMR performs basic lifesaving and first aid.

Objectives:

- Explain the basic components of the EMS system and the function of the EMR within EMS.
- Lift, move, and position patients safely and effectively.
- Recognize potential life threats based on a systematic patient assessment.
- Demonstrate the ability to assess patients, including appropriate physical exams, histories, baseline vital, and reassessments, and give a thorough patient report.

Medical Terminology

2 Credit/60 Clock-Hours

Medical Terminology provides instruction on how to interpret and understand the technical language of medicine. Students learn the basic structure of medical terms including prefixes, suffixes, word roots, special endings, plural forms, abbreviations, and symbols. Emphasis is placed on the correct spelling, definition, application, and pronunciation of each term.

Objectives:

- Identify the four types of word parts in forming medical terms.
- Demonstrate construction of medical terms by correctly spelling, pronouncing, defining, and identifying selected terms.
- Identify and apply acceptable medical abbreviations.
- Use knowledge of word parts to define unfamiliar medical terms.

Phlebotomy I

2 Credits/60 Clock-Hours

Students learn about the past and present of phlebotomy practices, infection control, equipment and safety, the circulatory system, medical terminology, anatomy and physiology, pre-analytical consideration, venipuncture, straight venipuncture, butterfly venipuncture, special collections, patient identification and other relevant skills.

Objectives:

- Identify laboratory, OSHA, hazardous material, blood borne pathogen exposures, warning symbols, infection control and patient safety rules.
- Identify and use laboratory equipment and computer systems
- Demonstrate use of basic terminology for the healthcare setting, understand and utilize correct order of draw, and explain the basis of human anatomy and physiology related to venipuncture
- Correctly and safely draw blood from a patient by properly using any equipment and supplies necessary while identifying and adjusting for any challenges associate with the venipuncture.

Phlebotomy II

1 Credit/30 Clock-Hours

Students learn about advanced phlebotomy procedures to ensure adequate knowledge and skills in their professional field. Students will be able to hone their communication skills and well as their phlebotomy

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Medical Assistant

FY2023 / 28 Credits (900 Clock-Hours)

skills, while practicing real-life scenarios in a controlled classroom environment. Students learn about phlebotomy jobs and how to prepare the field by applying and demonstrating all skills learned.

Objectives:

- Obtain knowledge of advanced venipuncture procedures and identify when they are to be used.
- Correctly and safely perform blood draws from a patient by properly using any equipment and supplies necessary while identifying and adjusting for any challenges associated with the venipuncture.
- Demonstrate communication skills appropriate for the phlebotomy industry.
- Discuss the employment requirements and career opportunities within the phlebotomy industry.

Preparation for Workforce Entry

1 Credit/30 Clock-Hours

The preparation for workforce entry course prepares students to navigate obtaining employment as entry-level medical assistants. The student will prepare a resume that can be used as they prepare to apply for employment opportunities. Job interview techniques, proper dress, and applying to "Aggie Handshake" job board will be taught.

Objectives:

- Demonstrate the ability to produce a coherent and concise resume to present during job application.
- Practice skills in interview technique
- Verbalize an understanding of proper hygiene
- Dress for the job interview.
- Demonstrate knowledge of internet and print resources to find job opportunities



Utah System of Higher Education
 Medical Coding and Billing
 FY2023 / 30 Credits (900 Clock-Hours)

Medical Coding and Billing			
Institutions: Davis, Mountainland, Ogden-Weber, Salt Lake			
Certificate of Program Completion (Catalog Year: 2023, 30 Credits/900 Clock-Hours Required, CIP: 51.0713)			
Core (21 Credits/630 Clock-Hours)		Credits	Clock-Hours
TEMC 1050	Medical Insurance Billing I	2	60
TEMC 1060	Medical Insurance Billing II	3	90
TEMC 1070	Medical Office Software	2	60
TEMC 1110	Coding I	3	90
TEMC 1120	Coding II	3	90
TEMC 1130	Coding III	3	90
TEMC 1140	Coding IV	3	90
TEMC 1900	Coding Certification Exam Prep	2	60
Electives (9 Credits/270 Clock-Hours)			
Davis Technical College			
TEMC 1010	Introduction to Medical Coding and Billing	1	30
WKSK 1400	Workplace Success	2	60
TEMC 1210	Medical Terminology and Anatomy for Coding I	2	60
TEMC 1220	Medical Terminology and Anatomy for Coding II	2	60
TEBP 1030	Operating Systems and Email Applications	1	30
TEBP 1031	Word Processing Fundamentals	1	30
Mountainland Technical College			
TEMC 1020	Introduction to Medical Coding and Billing	1	30
TEMC 1230	Medical Terminology and Anatomy I	3	90
TEMC 1240	Medical Terminology and Anatomy II	3	90
TEMC 1410	Communications for Health Care Professionals	2	60
Ogden-Weber Technical College			
TEMC 1030	Introduction to Medical Coding	1	30
TEMC 1040	Introduction to Medical Billing	1	30
TEMC 1080	Medical Terminology	2	60
TEMA 1040	Anatomy and Physiology	4	120
TEMC 1420	Communication and Customer Service	1	30
Salt Lake Community College			
TEMC 1430	Workplace Relations	1	30
TEMC 1150	Business Grammar	1	30
TEMC 1160	Business Writing	1	30
TEMC 1250	Medical Terminology & Anatomy I	2	60
TEMC 1260	Medical Terminology & Anatomy II	2	60
TEMC 1170	Word Essentials	1	30
TEMC 1180	Excel Essentials	1	30



Utah System of Higher Education

Medical Coding and Billing

FY2023 / 30 Credits (900 Clock-Hours)

PROGRAM DESCRIPTION

The Medical Coding and Billing program provides students with the technical skills and knowledge for an entry-level position in a health care setting through competency-based education.

All students in the Medical Coding and Billing program study medical terminology, anatomy, laws and ethics, standard medical billing and coding methods, medical coding software, and functions of the Electronic Health Record (EHR). Students develop administrative office skills, receive hands-on experience using a Medical EHR system to schedule, manage patient accounts, and enter patient documentation. The program prepares students to work as entry-level Medical Coder and/or Biller in a medical office, clinic, or hospital.

In addition, medical coding and billing specialists examine how to code diagnoses and procedures performed or identified by a physician. Students also explore how to process health insurance claims, examine coverage issues, and processes for billing and collections. Medical billing and coding specialists prepare to take the National Certified Professional Coding (CPC) examination through American Academy of Professional Coders (AAPC). There are other medical coding certification exams available including Certified Coding Specialist (CCS) offered by the American Health Information Management Association (AHIMA) and the Certified Medical Coder (CMC) offered by the Practice Management Institute (PMI).

Objectives:

- Define anatomy and medical terminology.
- Explain medical, legal and ethical responsibilities.
- Discuss the elements necessary for HIPAA compliance.
- Locate, document, and validate appropriate diagnostic and procedure codes using the current ICD-10-CM, CPT, and HCPCS coding manuals for professional services.
- Demonstrate proper billing, insurance claim preparation using medical office software, and reimbursement.
- Prepare to sit for the National Certification Exam.

COURSE DESCRIPTIONS

Medical Insurance Billing I

2 Credits/60 Clock-Hours

The Medical Insurance Billing I course is designed to provide the student with advanced skills necessary to perform and understand current processes regarding medical billing and collection concepts, regulations and guidelines.

Objectives:

- Identify the background and importance of accurate insurance claims submissions, coding and billing
- Differentiate between professional ethics and medical etiquette
- Identify instances when an employer, an employee or independent contractor can be liable when billing for medical services
- Demonstrate understanding of Privacy, Security and HIPAA in a healthcare setting.
- Explain Medical Necessity as it relates to National Correct Coding Initiative (NCCI/CCI)

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Utah System of Higher Education

Medical Coding and Billing

FY2023 / 30 Credits (900 Clock-Hours)

- Recognize various health Insurance models and explain best practices and tools for ensuring accurate and timely submission of medical claims for payment.
- Provide basic knowledge of national diagnosis and procedure/service coding systems
- Explain the impact of coding compliance, clinical documentation improvement (CDI), and coding for necessity

Medical Insurance Billing II

3 Credits/90 Clock-Hours

The Medical Insurance Billing II course is designed to provide the student with advanced skills necessary to perform and understand current processes regarding medical billing and collection concepts, regulations and guidelines. After successful completion of Medical Billing and Collections I and II the student will be able to apply correct billing concepts and demonstrate understanding of the medical claim life cycle.

Objectives:

- Explain Insurance carrier processing and payment received
- Identify major health insurance models and payers
- Construct a claim form
- Explain information about major insurance Programs and federal health care legislation
- Identify revenue cycle management concepts.
- Recognize hospital facility billing concepts and reimbursement methodology

Medical Office Software

2 Credits/60 Clock-Hours

The Medical Office Software course is designed to provide the student with hands on experience using practice management software comparable to the software used in medical offices today and basic knowledge of electronic health records (EHR).

Objectives:

- Identify the purpose for using a medical practice management system, and how legislation affects health information technology and medical practice management programs.
- Demonstrate how to use the administrative functions of a medical practice management software program.
- Demonstrate how to use the financial functions of a medical practice management software program.

Coding I

3 Credits/90 Clock-Hours

The Coding I course is designed to introduce students to the business side of medicine in the outpatient setting and provide the student with the skill and knowledge necessary to analyze and extract key information from the medical record to assign ICD-10-CM codes. This course also covers a detailed explanation of ICD-10-CM coding guidelines.

Objectives:

- Demonstrate correct code assignment using coding guidelines.
- Identify the correct diagnostic code (characters), using the guidelines, alphabetic index, and tabular list.
- Differentiate the information from patient chart notes and surgical notes to identify the diagnostic term(s).
- Select the correct coding sequence for billing purposes.
- Demonstrate understanding of the business side of medicine in the outpatient setting.

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Utah System of Higher Education

Medical Coding and Billing

FY2023 / 30 Credits (900 Clock-Hours)

Coding II

3 Credits/90 Clock-Hours

The Coding II course is a continuation of Coding I. This course is designed to provide the student with the knowledge and skills essential to evaluate and extract significant information from the medical record and to assign the correct CPT, HCPCS, modifiers and diagnostic codes to the medical claim. This course also covers a detailed explanation of CPT coding concepts and guidelines.

Objectives:

- Describe key components and common pathologies of the skin, hair, nails and breasts.
- Analyze procedures and surgeries as they relate to the skin, hair, nails and breasts.
- Describe the components and common pathologies of the musculoskeletal system.
- Analyze orthopedic surgeries and how they relate to pathological conditions.
- Describe basic anatomy and functions of the respiratory system, hemic and lymphatic systems, and the mediastinum and diaphragm.
- Review diagnoses common to the respiratory system, the hemic and lymphatic systems, and the mediastinum and diaphragm.
- Identify HCPCS Level II codes and guidelines as they apply to the respiratory system, the hemic and lymphatic systems, and the mediastinum and diaphragm.
- Demonstrate appropriate use of modifiers.

Coding III

3 Credits/90 Clock-Hours

The Coding III course is a continuation of Coding II. This course is designed to provide the student with the knowledge and skills essential to evaluate and extract significant information from the medical record and to assign the correct CPT, HCPCS, Modifiers and diagnostic codes to the medical claim. This course also covers a detailed explanation of CPT coding concepts and guidelines.

Objectives:

- Define key terms and common pathologies related to the cardiovascular system.
- Analyze cardiovascular procedures and surgeries, and where in CPT to locate relevant codes.
- Define and understand key terms and procedures associated with the digestive tract.
- Describe anatomy associated with procedures performed on the digestive tract.
- Assign appropriate CPT surgery codes from the digestive subsection.
- Describe the anatomy and function of the urinary system and male reproductive system.
- Demonstrate appropriate use of modifiers.
- Explain ICD-10-CM and HCPCS Level II codes and coding guidelines as they apply to the systems covered in this course.

Coding IV

3 Credits/90 Clock-Hours

The Coding IV course is a continuation of Coding III. This course is designed to provide the student with the knowledge and skills essential to evaluate and extract significant information from the medical record and to assign the correct CPT, HCPCS, Modifiers, and diagnostic codes to the medical claim. This course also covers a detailed explanation of CPT coding concepts and guidelines.

Objectives:

- Identify anatomical concepts important to understand the endocrine and nervous systems.
- Analyze eye surgeries and ear surgeries and how they relate to the most common pathologies.



Utah System of Higher Education

Medical Coding and Billing

FY2023 / 30 Credits (900 Clock-Hours)

- Interpret anesthesia coding guidelines and determine when other services may be billed in conjunction with anesthesia.
- Describe anatomical planes, anatomical directions, and positioning in radiology.
- Define key terms associated with radiology and describe the use and coding of contrast material.
- Define terms and concepts specific to pathology and laboratory coding.
- Analyze E/M services and differentiate between a new patient and an established patient. Abstract a provider's note to arrive at the level of service.
- Discuss diverse noninvasive or minimally invasive diagnostic and therapeutic services covering multiple specialties.

Coding Certification Exam Prep

2 Credits/60 Clock-Hours

The Coding Certification Exam Prep course prepares students to sit for a national coding certification. This comprehensive course covers all of the necessary information and skills required to pass the exam and become a certified medical coder. The course also includes practical exercises and mock exams to help students develop the coding skills and confidence needed to pass the exam.

Objectives:

- Explore the pre-review exam
- Identify the elements of ICD-10 - CM, CPT, and HCPCS.
- Define relevant medical terminology and anatomy.
- Explain how to schedule an exam and maintain credentials.

NON-ALIGNED (ELECTIVE) COURSES

Davis Technical College

Introduction to Medical Coding and Billing

1 Credit/30 Clock-Hours

Introduction to Medical Coding and Billing will present the program orientation and students will explore various program concepts. This course will introduce students to HIPAA guidelines. The course will also cover emergency procedures and infection control in the healthcare office.

Objectives:

- Explain the background of the HIPAA regulations, HIPAA privacy and security rules, OSHA's role in regulating safety and health standards for the healthcare office, the role of workplace professionalism in career success
- Describe the role of the health professional in HIPAA compliance, patient rights provided by HIPAA, procedures and processes to assure current and future compliance with evolving HIPAA regulations, steps to maintain office security, the new hazardous communication standards, the job responsibilities the medical billing and coding specialist.
- Define legal terminology used in the HIPAA regulations.
- Identify the training requirements for HIPAA compliance, violations of HIPAA, compare medical ethics and medical etiquette.

Workplace Success

2 Credits/60 Clock-Hours

Workplace Success is designed to help students develop essential work habits and attitudes as well as human-relation skills needed to maintain gainful and satisfying employment. Topics include common challenges faced in the workplace, such as presenting yourself professionally, developing a professional work ethic, developing interpersonal skills, navigating office politics successfully, and

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Medical Coding and Billing

FY2023 / 30 Credits (900 Clock-Hours)

planning and managing your career.

Objectives:

- Demonstrate a positive attitude and set and accomplish personal and career goals
- Manage time, stress, organization and finances
- Explain conflict resolution, negotiation and communication in the workplace
- Display a strong work ethic and illustrate accountability
- Perform work within a group effectively and discuss the value of negotiation and compromise
- Describe the basics of public speaking and presenting a professional demeanor
- Implement career goals and take active control of professional life

Medical Terminology and Anatomy for Coding I

2 Credits/60 Clock-Hours

This course is designed to introduce the students to key medical coding guidelines and will tie medical terminology and anatomy terms to current medical codes. Students will study and learn the language of the medical professional and how specific vocabulary relates to both ICD-10-CM and CPT codes.

Objectives:

- Recognize common abbreviations used in each body system and specialty area.
- Build, analyze, and define medical terms using word parts
- Apply medical terminology and anatomy to current ICD-10-CM and CPT coding definitions
- Describe the origin of medical terms, organizational components of the body, directional terms, anatomic plans, regions, and quadrants.
- Identify the major body systems structure and their related word parts and plural endings for medical terms
- Define medical terms related to diseases and disorders, diagnostic terms for each body system, Surgical terms related to each body system, the four-word parts and the combining vowel

Medical Terminology and Anatomy for Coding II

2 Credits/60 Clock-Hours

This course is a continuation of Medical Terminology and Anatomy for Coding I. This course is designed to introduce the students to key medical coding guidelines and will tie medical terminology and anatomy terms to current medical codes. Students will study and learn the language of the medical professional and how specific vocabulary relates to both ICD-10-CM and CPT codes.

Objectives:

- Recognize common abbreviations used in each body system and specialty area.
- Build, analyze, and define medical terms using word parts
- Apply medical terminology and anatomy to current ICD-10-CM and CPT coding definitions
- Describe the origin of medical terms, organizational components of the body, directional terms, anatomic plans, regions, and quadrants.
- Identify the major body systems structure and their related word parts and plural endings for medical terms
- Define medical terms related to diseases and disorders, diagnostic terms for each body system, Surgical terms related to each body system, the four-word parts and the combining vowel

Operating Systems and Email Applications

1 Credit/30 Clock-Hours

In this course students will learn essential skills needed to successfully use a computer in school and at work. They will learn how to maneuver within the Windows environment through hands-on activities; including, launching programs, working with windows and the taskbar to enable multitasking, customizing

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the desktop, and managing files. Students will learn to use both a USB drive and the cloud for file storage. Finally, students will learn how to use the Internet to efficiently search for information on the Web and send and receive email.

Objectives:

- Practice occupational safety when working on computers.
- Customize a computer work environment under the Windows 10 Operating System.
- Operate a computer using basic operating system functions.
- Multitask effectively using the taskbar and program windows.
- Use common features found in drop-down menus, on toolbars and ribbons, and on scroll bars.
- Demonstrate understanding of computer file structures by creating new folders and subfolders to organize files.
- Find files and folders with Windows Search and Windows Explorer.
- Define the Internet and describe how a computer connects to it.
- Navigate the web by using a browser's address bar, hyperlinks, favorites, the history panel, and search engines.
- Identify when you are browsing with a secure connection.
- Send, receive, and reply to email message.
- Attach files to and open attachments from email messages.
- Describe common ways to safeguard against Internet security threats.
- Use email contacts to send messages to multiple addressees and create groups.

Word Processing Fundamentals

1 Credit/30 Clock-Hours

In this course students will learn essential skills needed to successfully use a computer in school and at work. They will learn how to maneuver within the Windows environment through hands-on activities; including, launching programs, working with windows and the taskbar to enable multitasking, customizing the desktop, and managing files. Students will learn to use both a USB drive and the cloud for file storage. Finally, students will learn how to use the Internet to efficiently search for information on the Web and send and receive email.

Objectives:

- Navigate in a document using the mouse, the scroll bars, and the navigation pane.
- Open, close, and save a document.
- Select, copy, move, and edit text.
- Customize documents using character, paragraph, and section formatting.
- Use and customize the Ribbon, the Quick Access toolbar, and the Mini toolbar.
- Use the proofreading tools, including the Spelling and Grammar check and Find and Replace.

Mountainland Technical College

Introduction to Medical Coding and Billing

1 Credit/30 Clock-Hours

The Introduction to Medical Coding and Billing course starts with a new student orientation and an outline of the Medical Coding and Billing course and program policies. Students complete assignments in Word and Excel that are essential for the workplace. Students create a cover letter and current resume.

Objectives:

- Review and acknowledge Mountainland Technical College (MTECH) and classroom policies.

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Medical Coding and Billing

FY2023 / 30 Credits (900 Clock-Hours)

- Demonstrate how to use Canvas and MTECH Student Portal.
- Attach and upload files to a USB or Google Storage.
- Demonstrate basic skills of formatting text, copy, cut, adjust line spacing, spell check, find and replace option and printing in Word.
- Demonstrate basic skills of formatting cells, sorting columns, use the sum, average and find function in Excel.
- Search for online employment opportunities and understand the skills and knowledge required for employment.
- Produce a cover letter and resume.

Medical Terminology and Anatomy I

3 Credits/90 Clock-Hours

This course will introduce students to important word parts such as roots, prefixes and suffixes that provide a foundation for learning medical terms. This course is organized by body systems and begins with an overview of terminology associated with the body's structures and functions, continues through diseases and disorders, and ends with diagnostic procedures, treatments and Pharmacology. Medical Terminology and Anatomy I covers the Integumentary, Muscular, Skeletal, Digestive, Urinary and Reproductive Systems.

Objectives:

- State the rules for word components that form medical terms including common prefixes, suffixes and root words as they pertain to each body system.
- Describe the rules for using singular and plural terms.
- Define medical words, abbreviations and acronyms.
- Interpret graphic symbols into their medical terms.
- Describe the structural organization of the human body.
- Distinguish the location and function of anatomical terms.
- Identify body planes, directional terms, quadrants and cavities of the human body.
- Demonstrate steps to locate medical words using either a medical dictionary or an online resource.

Medical Terminology and Anatomy II

3 Credits/90 Clock-Hours

This course is a continuation of Terminology & Anatomy I. The course is organized by body systems and begins with an overview of terminology associated with the body's structures and functions, continues through diseases and disorders, and ends with diagnostic procedures and treatments including Pharmacology.

Medical Terminology and Anatomy II covers Respiratory, Cardiovascular, Lymphatic, Endocrine and Nervous Systems.

Objectives:

- List the location and function of anatomical terms for each body system.
- Describe the structural organization of the human body of each body system.
- Identify the anatomical location of major organs in each body system.
- Compare the structure and function of the human body across the lifespan.
- Describe the normal function of each body system.
- Identify common pathology related to each body system.
- Recognize terms related to pathology and procedures for mental and behavioral health.



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Medical Coding and Billing

FY2023 / 30 Credits (900 Clock-Hours)

Communication for Health Care Professionals

2 Credits/60 Clock-Hours

This course is designed to provide the student with successful therapeutic communication skills that are necessary in a healthcare setting.

Objectives:

- List six steps to successful professional communication.
- Compare professional, therapeutic, and social communications.
- Contrast verbal and nonverbal communication by using examples.
- Examine barriers to multicultural therapeutic communication
- Describe examples of the negative and positive components of both the alternative and traditional therapies for medical care.
- List essential guidelines for therapeutic communication for each age group.
- Compare multiple therapeutic responses for clients who are angry, depressed or have addictive disorders.
- Identify cultural differences in life-altering illness, grief and death experiences.

Ogden-Weber Technical College

Introduction to Medical Coding

1 Credit/30 Clock-Hours

This course is designed to provide the student with an introduction to the role and responsibilities of a medical coder and explain some of the basic tools and resources used by medical coders in the performance of their duties.

Objectives:

- Comprehend the meaning of Medical Coding.
- Recognize the difference between Medical Coding and Medical Billing.
- List the primary code classification systems used by Medical Coders and Medical Billers.
- Explain the purpose of ICD-10-CM codes, CPT codes and HCPCS Level II codes.
- Perform a basic code search for a diagnosis code.
- Perform a basic code search for a procedure code.

Introduction to Medical Billing

1 Credit/30 Clock-Hours

This course is designed to introduce the student to the role and responsibilities of a medical biller and provide the student with the basic skills necessary to prepare a claim form for submission for reimbursement.

Objectives:

- Describe the types of health insurance and identification cards associated with the health care plans.
- Identify the different code sets used for billing.
- Explain the importance of a fully completed patient demographic form.
- Recognize the requirements for specific blocks on the CMS-1500 claim form.
- Accurately complete a CMS-1500 claim form for a patient's encounter in the provider's office.
- Explain the advantages of electronic claims submission.
- Decipher the EOB and determine the next step in the billing process.
- Explain the difference between rejected claims and denied claims.
- Describe the function of rebilling.

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Medical Coding and Billing

FY2023 / 30 Credits (900 Clock-Hours)

- Describe the different approaches to collections.

Medical Terminology

2 Credits/60 Clock-Hours

This course will provide instruction on how to interpret and understand medical language as well as the basic structure of medical words. Additionally, this course will explore interpretations of medical abbreviations for those seeking a career in medicine.

Objectives:

- Identify the role of the four main types of word parts that make up medical terms.
- Use knowledge of word parts to define unfamiliar medical words.
- Describe steps to locate medical words using either a medical dictionary or an online resource.
- Define commonly used word parts, medical terms, and abbreviations.
- Recognize the importance of spelling medical terms correctly.

Anatomy and Physiology

4 Credits/120 Clock-Hours

The Anatomy and Physiology course is designed to familiarize the student with the plan and structure of the human body, its function under normal, healthy conditions, and an introduction to the body's response to illness and disease. Instruction covers an overview of all organ systems, including diagnostic treatment modalities. Medical terms as they relate to the body and correct spelling and pronunciation are taught.

Objectives:

- Locate and label major organs and structures in the body systems.
- Identify and state the function of the major anatomical components of the human body.
- Describe common disorders associated with each major anatomical component.
- Identify common pathology related to each body system.

Communication and Customer Service Skills

1 Credit/30 Clock-Hours

This course will explore the basic structure and function of the human body, as well as common disease processes and treatments.

Objectives:

- Describe the structural organization of the human body
- List the body systems
- Describe body planes, directional terms, quadrants and cavities
- List the major organs that comprise each body system
- Identify the anatomical location of major organs in each body system
- Compare the structure and function of the human body across the life span
- Describe the normal function of each body system
- Identify common pathology related to each body system

Salt Lake Community College

Workplace Relations

1 Credit/30 Clock-Hours

This course will provide training in workplace relationship, including interaction skills, managing difficult people, with an emphasis on soft skills.

Objectives:

- Demonstrate excellent Workplace Relations skills

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Medical Coding and Billing

FY2023 / 30 Credits (900 Clock-Hours)

- Explain workplace skills as a Workplace Relations Representative
- Describe the importance of ethics as a Workplace Relations Representative
- Demonstrate professionalism as a Workplace Relations Representative
- Understand problem resolution and recovery strategies
- Explain the importance of Workplace Relationship when viewing organizational goals and professional skills required.

Business Grammar

1 Credit/30 Clock-Hours

Students will gain a greater knowledge of grammar and how to apply it in business settings. Students will learn how to use verb tenses, subject verb agreements, parts of speech, active and passive voice, as well as identifying grammatical errors.

Objectives:

- Demonstrate the correct use of English grammar in written communications
- Demonstrate the ability to identify common grammar errors in written correspondence
- Apply proper sentence structure
- Demonstrate proper use of difficult and confusing words

Business Writing

1 Credit/30 Clock-Hours

Students learn the basic elements of Business Writing, including the use of grammar and proofreading review. Students will develop and review various business documents.

Objectives:

- Demonstrate the ability to organize thoughts to create professional business documents
- Create a variety of business documents, including emails, memos, and letters in the proper format
- Develop a complete, ready-to-go resume, cover letter, and thank you note
- Proofread professional documents for clarity and grammar use

Medical Terminology & Anatomy I

2 Credits/60 Clock-Hours

This course will teach students how to break down medical terms into root words, prefixes and suffixes in order to interpret and understand the medical language. Students will gain knowledge of medical abbreviations. Additionally, this class covers human anatomy and physiology concepts required to help students prepare for the Medical Coding Certification exam.

Objectives:

- Identify roots, prefixes, and suffixes that form the medical terms.
- Define medical terms and abbreviations
- Identify directional terms and body planes
- Explain how body systems function and interact
- Identify anatomical terms

Medical Terminology & Anatomy II

2 Credits/60 Clock-Hours

This course is a continuation of Medical Terminology & Anatomy I. This course will continue to teach how to break down medical terms in order to interpret and understand the medical language as well as gain knowledge of medical abbreviations of additional body systems.

Objectives:

- Identify roots, prefixes, and suffixes that form the medical terms

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Medical Coding and Billing

FY2023 / 30 Credits (900 Clock-Hours)

- Define medical terms and abbreviations
- Identify the location of organs in the body system
- Explain how body systems function and interact
- Identify common pathology related to each body system

Word Essentials

1 Credit/30 Clock-Hours

Students will gain a basic understanding on how to use Word for both work and home. Coverage will include formatting and modifying, as well charts and tables.

Objectives:

- Demonstrate how to use open, close, save, rename and print
- Demonstrate how to use the clipboard, cut, copy and pasting features
- Demonstrate how to format text
- Demonstrate se the proofreading tools, including Spell Check, Grammar Check, as well as Find and Replace

Excel Essentials

1 Credit/30 Clock-Hours

Students will gain a basic understanding on how to use Excel for both work and home. Coverage will include formatting and modifying, as well as simple functions.

Objectives:

- Demonstrate how to open, close, save, rename and print
- Demonstrate how to use the clipboard, cut, copy and pasting features
- Demonstrate how to format text
- Use the proofreading tools, including Spell Check, Grammar Check, as well as Find and Replace
- Demonstrate how to enter simple functions
- Identify rows and columns



Utah System of Higher Education
Pharmacy Technician – Entry Level
FY2023 / 13 Credits (450 Clock-Hours)

Pharmacy Technician – Entry Level			
Institutions: Mountainland			
<i>Certificate of Program Completion (Catalog Year: 2023, 13 Credits/450 Clock-Hours Required, CIP: 51.0805)</i>			
Core (13 Credits/480 Clock-Hours)		Credits	Clock-Hours
TEPT 1010	Introduction to Pharmacy	3	90
TEPT 1100	Community Pharmacy Practice	3	90
TEPT 1110	Institutional Pharmacy Practice	3	90
TEPT 1910	Pharmacy Technician Externship	4	180



Utah System of Higher Education

Pharmacy Technician – Entry Level
FY2023 / 13 Credits (450 Clock-Hours)

PROGRAM DESCRIPTION

The Pharmacy Technician – Entry Level program prepares students to support pharmacists by performing a wide range of practice-related duties for community, institutional, compounding, long-term care, mail-order, and other pharmaceutical settings. Students learn the most common medications, calculate dosages, process prescriptions, bill third-party insurance, learn aseptic techniques, and prepare sterile and non-sterile compounded medications. Students receive extensive hands-on training in the lab area using advanced pharmacy technology.

Objectives:

- Practice personal and interpersonal skills needed in various pharmacy settings.
- Demonstrate the pharmacy technician's role in the medication-use process and wellness promotion.
- Recall the most utilized drugs by brand and generic name, indications, and interactions.
- Solve pharmacy mathematical calculations.
- Prepare sterile and non-sterile compounds.

COURSE DESCRIPTIONS

Introduction to Pharmacy

3 Credit/90 Clock-Hours

This course serves as an introduction to the pharmacy technician profession, pharmacy technician roles, and the different types of pharmacies within the healthcare delivery system. Students are introduced to state and federal pharmacy practice laws, and the pharmacists' patient care process. Students learn the concepts of pharmacology, medications, and calculations needed to ensure patient safety.

Objectives:

- Compare and contrast the pharmacy technician's role, pharmacist's role, and other occupations in the healthcare environment.
- Describe and apply state and federal laws pertaining to pharmacy practice.
- Recognize and apply the pharmacists' patient care process.
- Relate the basic history of pharmacy to today's pharmacy practice.
- Demonstrate the technicians' role in the medication use process.

Community Pharmacy Practice

3 Credits/90 Clock-Hours

This course teaches the skills necessary for working in community pharmacy settings. Students perform hands-on skill simulations including data entry, prescription processing, billing, fulfillment, inventory management, customer service, and patient safety.

Objectives:

- Identify the most utilized drugs by brand and generic name and their indications.
- Recognize common drug interactions.
- Perform essential duties and functions of a pharmacy technician in a community pharmacy.
- Describe major trends, issues, goals, and initiatives taking place in the pharmacy profession.
- Initiate, verify, and manage billing for complex and/or specialized pharmacy services and goods.
- Apply interpersonal skills, including negotiation skills, conflict resolution, customer service, communicating patient safety, and teamwork.



Utah System of Higher Education

Pharmacy Technician – Entry Level
FY2023 / 13 Credits (450 Clock-Hours)

Institutional Pharmacy Practice

3 Credits/90 Clock-Hours

This course teaches the skills necessary for working in institutional pharmacy settings. Students will utilize hands-on skill simulations of institutional pharmacy responsibilities including sterile compounding and aseptic technique, hazardous drug management, unit dosing and dispensing, patient safety, and communication with hospital staff.

Objectives:

- Practice and adhere to effective infection control procedures.
- Prepare compounded sterile preparations per applicable, current United States Pharmacopeia chapters.
- Demonstrate knowledge of anatomy, physiology and pharmacology, and terminology relevant to the pharmacy technician's role.
- Perform essential duties and functions of a pharmacy technician in an institutional setting.
- Describe the different methods of drug delivery and administration within institutional settings.
- Practice patient safety and communication with hospital staff.

Pharmacy Technician Externship

4 Credits/180 Clock-Hours

In this course, students will demonstrate their abilities to function as a pharmacy technician in industry settings. This experience takes place under the supervision of a pharmacist or an experienced pharmacy technician, and includes a combination of skills-practice and evaluation.

Objectives:

- Assist pharmacists in collecting, organizing, and recording patient information.
- Maintain pharmacy facilities and equipment.
- Receive, process, and prepare prescriptions/medication orders.
- Demonstrate a respectful and professional attitude when interacting with diverse patient populations and medical professionals.
- Participate in pharmacy compliance with professional standards and relevant legal, regulatory, formulary, contractual, and safety requirements.



Utah System of Higher Education

Web Business

FY2023 / 16 Credits (480 Clock-Hours)

Web Business			
Institutions: USU-E			
<i>Certificate of Program Completion (Catalog Year: 2023, 16 Credits/480 Clock-Hours Required, CIP: 52.0208)</i>			
Core (16 Credits/480 Clock-Hours)		Credits	Clock-Hours
TEIT 1100	Introduction to Networking	1	30
TEIT 1310	Website Design	3	90
TEBP 1700	Marketing I	3	90
TEIT 2500	Web Business	3	90
TEBP 1650	Management Principles	2	60
TEBP 2000	Introduction to Entrepreneurship	3	90
TEIT 1050	Career & Workplace Relations	1	30



Utah System of Higher Education

Web Business

FY2023 / 16 Credits (480 Clock-Hours)

PROGRAM DESCRIPTION

The Web Business program provides education and training for those who want to setup, manage, and/or conduct business on the Web, either for themselves for of other business entities. Students will gain background of the internet, the designing websites with e-commerce, marketing, management principles and entrepreneurship. Students will apply what they learn in this program by designing web-pages and creating and e-commerce web site using appropriate business principles, promotion, and marketing techniques in conjunction with social media. They will apply these concepts within the unique management required of the Web that differs from a traditional business.

Objectives:

- Explore and create an e-commerce website.
- Demonstrate the use of marketing principles using e-commerce and social media
- Demonstrate problem-solving skills and best practices involved with doing business on the web
- Practice workplace professionalism

COURSE DESCRIPTIONS

Introduction to Networking

1 Credits/30 Clock-Hours

Introduction to Networking provides foundational-level instruction on the concepts, models, services, settings, protocols, topologies, and devices used in computer networks. Students also explore the Open Systems Interconnection (OSI) and Transmission Control Protocol/Internet Protocol (TCP/IP) models.

Objectives:

- Define common concepts and terms associated with computer networking.
- Identify and differentiate the purpose and function of common networking devices.
- Identify and differentiate common networking ports, protocols and services.
- Identify components of the OSI and TCP/IP models.
- Compare and contrast network topologies and access methods.

Website Design

3 Credit/90 Clock-Hours

This course focuses on design and construction of Web pages using HTML, Cascading Style Sheets, and JavaScript. Students will have hands-on experience creating and publishing web pages. This course also focuses on basics of hosting, publishing, promoting, and maintaining websites.

Objectives:

- Understand web hosting and critique website designs
- Demonstrate use of HTML5 and Cascading Style Sheets (CSS) in developing web pages
- Develop web pages using images, multimedia, tables and forms.
- Apply basic JavaScripting to web Pages
- Publish, Promote, and Maintain a website
- Evaluate and use Website Builders or Content Management Systems (CMS)

Marketing I

3 Credits/90 Clock-Hours

Marketing I introduces the marketing function by emphasizing concepts and terminology. Students will explore components of the marketing mix, opportunities available, marketing ethics, and globalization.

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Web Business

FY2023 / 16 Credits (480 Clock-Hours)

Students will incorporate consumer behavior, product placement, SWOT, and market research in a marketing plan.

Objectives:

- Describe a product lifecycle, the four Ps of marketing, and market opportunities
- Explore the elements of a marketing plan
- Evaluate marketing research and positioning
- Analyze social, economic, technological, competitive and regulatory forces

Web Business

3 Credits/90 Clock-Hours

This course is an introduction to Web-based business. Students will learn business concepts relating to on-line and world-wide e-commerce. Also marketing concepts, design strategies, and technical issues as they relate to Web-based businesses will be discussed.

Objectives:

- Review technology infrastructure of the Internet and the World Wide Web
- Understand the implications of selling on the web — regional and worldwide
- Develop marketing concepts on the web in conjunction with social media, mobile, and online auctions.
- Explain how to improve efficiency and reduce costs
- Discuss the environment of electronic commerce involving ethical, legal, and tax Issues
- Explain web server hardware and software, electronic commerce software and associated security needs
- Plan for electronic commerce including the implementation of payment systems that are commonly used

Management Principles

2 Credits/60 Clock-Hours

Management principles will address strategies related to starting, owning, operating, and growing a small business. Students will explore marketing, financial management, leadership, ethics, and growth opportunities. Upon successful completion of this course, students will be able to demonstrate industry-level competency.

Objectives:

- Explore the human and legal aspects of starting and organizing a business
- Practice analyzing and managing the financial aspects of a business including cash flow, financing, and profit management
- Demonstrate an understanding of how to manage the operations of a business effectively and efficiently

Introduction to Entrepreneurship

3 Credits/90 Clock-Hours

The Introduction to Entrepreneurship course examines what it takes to start a new business. Students will explore business ideas and strategies. Upon successful completion of this course, students will have the necessary tools to create or expand a start-up business.

Objectives:

- Create a business plan
- Analyze target markets and sales strategies
- Identify ethical and sound decision-making practices

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Web Business

FY2023 / 16 Credits (480 Clock-Hours)

- Project business costs and revenues

Career & Workplace Relations

1 Credits/30 Clock-Hours

Career and Workplace Relations is designed to help students gain insight into how their skills and professionalism enhance relationships between management and coworkers. Instruction includes employment skills such as communication, critical thinking, professional etiquette, team dynamics and more.

Objectives:

- Identify personal and transferable skills, competencies and/or abilities.
- Create an industry specific resume, cover letter, thank you letter, reference list, and online presence.
- Demonstrate effective interviewing skills.
- Submit an application for an industry specific position.
- Demonstrate effective use of job search websites.