UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Business
FY2026 / 19 Credits (570 Clock-Hours)

Business

Institutions: Bridgerland, Davis, Ogden-Weber, Tooele, Uintah Basin, USU-Eastern

Technical Certificate (Catalog Year: 2026, 19 Credits/570 Clock-Hours Required, CIP: 52.0401)

Foundational Courses (19 Credits/570 Clock-Hours)		**Credits**	**Clock-Hours**
TEBP 1000	Financial Principles	3	90
TEBP 1100	Digital Literacy	2	60
TEBP 1130	Word Processing	2	60
TEBP 1140	Spreadsheets	2	60
TEBP 1200	Professionalism	3	90
TEBP 1500	Business English	1	30
TEBP 1550	Business Communication	3	90
TEBP 1840	Business Productivity	3	90
Supplemental Courses			
Bridgerland (11 Credits/330 Clock-Hours)			
TEBP 1150	Presentations	2	60
TEBP 1300	Accounting I	2	60
TEBP 1350	Computerized Accounting	3	90
TEBP 1650	Management Principles	2	60
TEBP 2000	Introduction to Entrepreneurship	3	90
TEBP 2130	Advanced Word Processing	2	60
TEBP 2140	Advanced Spreadsheets	2	60
TEBP 2160	Database	2	60
TEBP 2180	Intro to Adobe Suite	2	60
TEBP 2300	Accounting II	2	60
TEBP 2350	Payroll Accounting	2	60
TEBP 2390	Accounting Capstone	1	30
TEBP 2640	Public Relations	2	60
TEBP 2700	Marketing in Business	2	60
TEBP 2890	Administrative Capstone	1	30
TEBP 2900	Business Externship	2	90
Davis (11 Credits/330 Clock-Hours)			
TEBP 1150	Presentations	2	60
TEBP 1300	Accounting I	2	60
TEBP 1350	Computerized Accounting	3	90
TEBP 2110	Google Drive	1	30
TEBP 2130	Advanced Word Processing	2	60
TEBP 2140	Advanced Spreadsheets	2	60
TEBP 2160	Database	2	60
TEBP 2190	Email Applications	2	60
TEBP 2300	Accounting II	2	60
TEBP 2320	Accounting III	2	60
TEBP 2390	Accounting Capstone	1	30
TEBP 2410	Financial Planning	2	60
TEBP 2610	Social Media Marketing	2	60
TEBP 2760	Introduction to Sales	1	30
TEBP 2770	Sales Techniques and Presentations	2	60
TEBP 2810	Advanced Keyboarding	1	30
TEBP 2820	Records Management	3	90
TEBP 2890	Administrative Capstone	1	30

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TEBP 2900	Business Externship	2	90
Ogden-Weber (11 Credits/330 Clock-Hours)			
TEBP 1150	Presentations	2	60
TEBP 1300	Accounting I	2	60
TEBP 1350	Computerized Accounting	3	90
TEBP 1700	Marketing I	3	90
TEBP 1750	Sales Fundamentals	2	60
TEBP 2000	Introduction to Entrepreneurship	3	90
TEBP 2300	Accounting II	2	60
TEBP 2610	Social Media Marketing	2	60
TEBP 2620	Fundamentals of Human Resources	2	60
TEBP 2630	Principles of Leadership	2	60
TEBP 2650	Project Management Essentials	2	60
TEBP 2750	Customer Relationship Management	2	60
TEBP 2821	Records Management	2	60
Tooele (11 Credits/330 Clock-Hours)			
TEBP 1150	Presentations	2	60
TEBP 1300	Accounting I	2	60
TEBP 1350	Computerized Accounting	3	90
TEBP 2130	Advanced Word Processing	2	60
TEBP 2145	Advanced Spreadsheet Applications	3	90
TEBP 2165	Database Applications	2	60
TEBP 2300	Accounting II	2	60
TEBP 2400	Personal Information Management	1	30
TEBP 2810	Advanced Keyboarding	1	30
TEBP 2910	Management Externship	1	45
Uintah Basin (11 Credits/330 Clock-Hours)			
TEBP 1150	Presentations	2	60
TEBP 1300	Accounting I	2	60
TEBP 1650	Management Principles	2	60
TEBP 1700	Marketing I	3	90
TEBP 1750	Sales Fundamentals	2	60
TEBP 2950	Special Applications	2	60
USU – Eastern (11 Credits/330 Clock-Hours)			
TEBP 1150	Presentations	2	60
TEBP 1300	Accounting I	2	60
TEBP 1350	Computerized Accounting	3	90
TEBP 1650	Management Principles	2	60
TEBP 1700	Marketing I	3	90
TEBP 2000	Introduction to Entrepreneurship	3	90
TEBP 2300	Accounting II	2	60
TEBP 2320	Accounting III	2	60
TEBP 2999	Business Externship	1-3	45-135
TEIT 2500	Web Business	3	90

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PROGRAM DESCRIPTION

The Business program offers foundational training that will prepare students to excel at a career in any business setting. The program fosters a strong work ethic and independent learning, where students can cultivate knowledge, practice technical skills, and develop professional work habits. Students will have the opportunity to earn industry certifications that verify technical skills and enhance credibility.

Objectives:

- Demonstrate computer proficiency by using business software to produce complex documents with speed, efficiency, and accuracy.
- Recognize principles of leadership and management by applying them in relevant business contexts.
- Use basic financial and accounting principles to complete general accounting functions.
- Develop written, verbal, and digital communication skills by preparing clear, concise, and correct messages for a business environment.
- Practice professional skills that are vital for career development and success in the workplace.

FOUNDATIONAL COURSE DESCRIPTIONS

Financial Principles — 3 Credits/90 Clock-Hours

The Financial Principles course introduces math concepts used in a variety of business contexts. Students will apply these principles to general purpose finance and accounting.

Objectives:

- Apply math principles to perform business calculations.
- Create and evaluate financial documents.
- Explore the accounting cycle.

Digital Literacy — 2 Credits/60 Clock-Hours

The Digital Literacy course explores current technology. Students will practice appropriately and effectively using tools for productivity and collaboration tools; finding reliable information; creating content; communicating safely; and identifying credibility and bias in modern digital environments.

Objectives:

- Demonstrate digital citizenship and appropriate interpersonal digital information.
- Describe concepts relating to common digital environments, software, hardware, and operating systems.
- Describe digital security threats and explain how to protect personal devices and digital content.
- Use tools and technologies to collaborate.
- Create, edit, and save digital content and manage digital information.
- Navigate the internet and evaluate the integrity of digital information.

Word Processing — 2 Credits/60 Clock-Hours

The Word Processing course focuses on creating and managing professional documents. Students will explore editing and formatting, enhancing documents with visual elements, and using collaboration and reference tools.

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Objectives:

- Manage word processing documents.
- Insert and format text, paragraphs, and sections.
- Manage tables and lists.
- Create and manage reference.
- Insert and format graphic elements.
- Manage document collaboration.

Spreadsheets **2 Credits/60 Clock-Hours**

The Spreadsheets course introduces the essential spreadsheet features needed to create worksheets by entering and editing data. Students will explore formulas and functions, visual elements, and formatting.

Objectives:

- Create, format, edit, print, and save worksheets and workbooks.
- Manage and manipulate data.
- Summarize data using charts, tables, and graphic elements.
- Use formulas and functions.

Professionalism **3 Credits/90 Clock-Hours**

The Professionalism course explores the power 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.

Business English **1 Credit/30 Clock-Hours**

The Business English course emphasizes the essentials of clear, concise, and correct business English. Students will demonstrate professional writing and proofreading by using accurate spelling, grammar, punctuation, and sentence fluency skills.

Objectives:

- Explore the fundamentals of the English language and why they are necessary for effective communication.
- Demonstrate the fundamentals of grammar, punctuation, spelling, and word usage.
- Proofread and edit existing documents for clarity and accuracy.

Business Communication **3 Credits/90 Clock-Hours**

The Business Communication course introduces students to best practices for planning, composing, and revising professional business messages. Students will explore the importance of using proper mechanics, knowing the intended audience, and organizing messages to communicate successfully.

Objectives:

- Create a variety of business documents in the proper format.
- Analyze the purpose, identify the audience, and select the appropriate channel to compose a successful message.
- Demonstrate the steps of business writing, including planning, writing, and revising.
- Demonstrate proofreading and editing skills.
- Explore digital media writing skills and techniques.

Business Productivity **3 Credits/90 Clock-Hours**

The Business Productivity course explores tools used by business professionals to create and sustain productivity, including coordinating office activities and preparing and organizing professional documents. Students will practice working and communicating efficiently to facilitate the success of their organization.

Objectives:

- Create and organize workplace documents.
- Demonstrate best practices for using, crafting, distributing, and tracking electronic communication.
- Develop interpersonal skills needed for supporting stakeholders at all levels of the company.
- Operate appropriate software applications for administrative support.

SUPPLEMENTAL COURSE DESCRIPTIONS

Bridgerland

Presentations **2 Credits/60 Clock-Hours**

The Presentations course explores developing and creating professional electronic presentations. Students will practice adding visual elements, formatting slides, incorporating audio and video elements, and saving and sharing files.

Objectives:

- Explore professionalism in presentations.
- Create professional presentations.
- Operate common electronic presentation software.
- Demonstrate use of graphics, formatting, animations, and transitions to enhance a presentation.

Accounting I **2 Credits/60 Clock-Hours**

The Accounting I course introduces the basic principles and language of accounting. Students will demonstrate record-keeping concepts, including analyzing, journalizing, and posting transactions for a service-based business. Students will complete the entire accounting cycle, close the books, and make correcting entries.

Objectives:

- Perform all stages of the accounting cycle.
- Create and analyze financial reports.
- Demonstrate best practices for ethical and accurate accounting.

Computerized Accounting — 3 Credits/90 Clock-Hours

The Computerized Accounting course introduces students to software available for automating accounting functions. Students set up and maintain the financial processes within a business..

Objectives:

- Use accounting software to set up a company and perform all stages of the accounting cycle.
- Use accounting software to create and analyze financial reports.
- Use accounting software to customize business documents, forms, reports, and graphs.
- Demonstrate best practices for ethical and accurate accounting.

Management Principles — 2 Credits/60 Clock-Hours

The Management Principles course addresses strategies related to starting, owning, operating, and growing a small business. Students will explore marketing, financial management, leadership, ethics, and growth opportunities.

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.
- Project business costs and revenue.

Advanced Word Processing — 2 Credits/60 Clock-Hours

The Advanced Word Processing course focuses on advanced techniques used to create and manage professional documents. Students will expand upon editing and formatting practices and specialized software features.

Objectives:

- Apply advanced collaboration tools.
- Use advanced tools to manipulate documents.
- Automate repetitive tasks to save time and effort.

Advanced Spreadsheets — 2 Credits/60 Clock-Hours

The Advanced Spreadsheets course focuses on advanced spreadsheet features used to further enhance worksheets. Students will expand formula applications and utilize analysis tools.

Objectives:

- Apply advanced formatting techniques and functions.
- Use collaboration features.
- Use advanced tools to forecast data outcomes.
- Automate repetitive tasks.

Database **2 Credits/60 Clock-Hours**

The Database course introduces the essential features needed to create a functional database. Students will explore tables, queries, and reports.

Objectives:

- Create, format, and edit tables.
- Execute query actions to compile data.
- Combine data in summary reports.
- Manage and manipulate data.

Introduction to Adobe Suite **2 Credits/60 Clock-Hours**

The Introduction to Adobe Suite course explores the basic features of popular Adobe software. Students will learn to modify photos, develop simple videos, create fillable forms, and more. Upon successful completion of this course, students will be able to produce attractive business media.

Objectives:

- Apply basic original-design principles.
- Create professional business documents and media.
- Develop a portfolio of completed projects.

Accounting II **2 Credits/60 Clock-Hours**

The Accounting II course expands upon the basic principles of accounting. Students will demonstrate bookkeeping concepts, including analyzing, journalizing, and posting transactions for a merchandising business. Students will complete the entire accounting cycle using special journals and classified financial statements.

Objectives:

- Perform all stages of the accounting cycle.
- Analyze and post transactions in special journals.
- Explore the payroll process.
- Calculate costs of goods sold for inventory.
- Demonstrate best practices for ethical and accurate accounting.
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Payroll Accounting **2 Credits/60 Clock-Hours**

The Payroll Accounting course provides an application-approach to accounting for payroll and tax reporting. Students will work through the steps of calculating employee payroll. Upon successful completion of this course, students will demonstrate payroll proficiency.

Objectives:

- Compute payroll and payroll taxes.
- Explore special circumstances that arise in the payroll process.
- Prepare financial statements.
- Demonstrate best practices for ethical and accurate payroll accounting.

Accounting Capstone **1 Credit/30 Clock-Hours**

The Accounting Capstone course integrates student knowledge and skills gained through previously completed coursework. Students will apply decision-making, critical-thinking, and problem-solving skills to complete realistic business projects. Students will demonstrate accounting proficiency upon completion of this course.

Objectives:

- Use professionalism skills to communicate effectively.
- Increase self-confidence through the application of coursework knowledge.
- Prepare for entry-level work in an accounting setting.

Public Relations **2 Credits/60 Clock-Hours**

The Public Relations course explores the skills necessary to build customer and community relationships. Students will be exposed to crisis responses, campaigns, and promotional activities. Students will be able to convey messages to audiences in a variety of circumstances.

Objectives:

- Utilize media sources to build relationships.
- Conduct quantitative and qualitative research.
- Develop and review goals.
- Write considerate messages to convey a positive business image.

Marketing in Business **2 Credits/60 Clock-Hours**

The Marketing in Business course exposes students to effective marketing techniques. Students will study target markets, marketing material, and supply and demand opportunities. Upon completion of this course, students will have completed a marketing plan.

Objectives:

- Analyze consumer behavior using market research.
- Explore social, economic, technological, competitive, and regulatory forces.
- Apply interactive and multichannel marketing in developing products and services.

Administrative Capstone **1 Credit/30 Clock-Hours**

The Administrative Capstone course integrates student knowledge and skills gained through previously completed coursework. Students will apply decision-making, critical-thinking, and problem-solving skills to complete realistic business projects. Students will demonstrate business office proficiency upon completion of this course.

Objectives:

- Demonstrate ability to work independently and efficiently.
- Use professionalism skills to communicate effectively.

- Increase self-confidence through the application of coursework knowledge.
- Prepare for entry-level work in a business office setting.

Business Externship **2 Credits/90 Clock-Hours**

The Business Externship course provides students with real-world work experience. Students will complete job-related activities as determined by the cooperating employer. Upon successful completion of this course, students will have practiced and mastered employer-set objectives, which may lead to employment.

Objectives:

- Demonstrate professional work habits.
- Apply knowledge and skills learned throughout the program.
- Accept employer feedback and improve accordingly.
- Perform self-evaluation on externship experience.

Davis

Presentations **2 Credits/60 Clock-Hours**

The Presentations course explores developing and creating professional electronic presentations. Students will practice adding visual elements, formatting slides, incorporating audio and video elements, and saving and sharing files.

Objectives:

- Explore professionalism in presentations.
- Create professional presentations.
- Operate common electronic presentation software.
- Demonstrate use of graphics, formatting, animations, and transitions to enhance a presentation.

Accounting I **2 Credits/60 Clock-Hours**

The Accounting I course introduces the basic principles and language of accounting. Students will demonstrate record-keeping concepts, including analyzing, journalizing, and posting transactions for a service-based business. Students will complete the entire accounting cycle, close the books, and make correcting entries.

Objectives:

- Perform all stages of the accounting cycle.
- Create and analyze financial reports.
- Demonstrate best practices for ethical and accurate accounting.

Computerized Accounting **3 Credits/90 Clock-Hours**

The Computerized Accounting course introduces students to software available for automating accounting functions. Students set up and maintain the financial processes within a business..

Objectives:

- Use accounting software to set up a company and perform all stages of the accounting cycle.
- Use accounting software to create and analyze financial reports.
- Use accounting software to customize business documents, forms, reports, and graphs.

- Demonstrate best practices for ethical and accurate accounting.

Google Drive **1 Credit/30 Clock-Hours**

The Google Drive course examines the features and uses of Google Drive applications using a hands-on approach. During this course, you will explore the uses of Google Drive, Google Docs, Google Sheets, Google Slides, Google Forms, and Google Drawings. You will create documents, pie charts, forms, sheets, and drawings using the various application found in Google Drive.

Objectives:

- Define Google Drive and relate its use to a workplace scenario.
- Construct a Google Docs file and utilize the download function.
- Develop a pie chart and a column chart in Google Sheets and utilize the share function.
- Design a Google Slides presentation and relate its use to a given scenario.
- Formulate a Google Form and use the send function.
- Create a Google Drawing.
- Evaluate the benefits of using Google Drive.

Advanced Word Processing **2 Credits/60 Clock-Hours**

The Advanced Word Processing course focuses on advanced techniques used to create and manage professional documents. Students will expand upon editing and formatting practices and specialized software features.

Objectives:

- Apply advanced collaboration tools.
- Use advanced tools to manipulate documents.
- Automate repetitive tasks to save time and effort.

Advanced Spreadsheets **2 Credits/60 Clock-Hours**

The Advanced Spreadsheets course focuses on advanced spreadsheet features used to further enhance worksheets. Students will expand formula applications and utilize analysis tools.

Objectives:

- Apply advanced formatting techniques and functions.
- Use collaboration features.
- Use advanced tools to forecast data outcomes.
- Automate repetitive tasks.

Database **2 Credits/60 Clock-Hours**

The Database course introduces the essential features needed to create a functional database. Students will explore tables, queries, and reports.

Objectives:

- Create, format, and edit tables.
- Execute query actions to compile data.
- Combine data in summary reports.
- Manage and manipulate data.

Email Applications — 2 Credits/60 Clock-Hours

The Email Applications course focuses on basic email features used in creating, sending, and receiving email messages. Practical business applications involving managing email messages, contacts, tasks, notes, and journal entries, as well as using the calendar features, will be covered.
Objectives:

- Navigate basic program menus and toolbars.
- Send, receive, and manage E-mail messages.
- Create and manage rules to automate message processing.
- Create events and appointments.
- Create and manage notes and journal entries.

Accounting II — 2 Credits/60 Clock-Hours

The Accounting II course expands upon the basic principles of accounting. Students will demonstrate bookkeeping concepts, including analyzing, journalizing, and posting transactions for a merchandising business. Students will complete the entire accounting cycle using special journals and classified financial statements.

Objectives:

- Perform all stages of the accounting cycle.
- Analyze and post transactions in special journals.
- Explore the payroll process.
- Calculate costs of goods sold for inventory.
- Demonstrate best practices for ethical and accurate accounting.

Accounting III — 2 Credits/60 Clock-Hours

The Accounting III course exposes students to managerial accounting and decision making. Students will explore departmental financial statements, inventory valuation methods, and horizontal and vertical analyses. Students will demonstrate sound financial decision-making processes for business.

Objectives:

- Compute ratios and rates to determine financial health of a business.
- Apply depreciation methods to account accurately for assets.
- Demonstrate best practices for ethical and accurate accounting.

Accounting Capstone — 1 Credit/30 Clock-Hours

The Accounting Capstone course integrates student knowledge and skills gained through previously completed coursework. Students will apply decision-making, critical-thinking, and problem-solving skills to complete realistic business projects. Students will demonstrate accounting proficiency upon completion of this course.

Objectives:

- Use professionalism skills to communicate effectively.
- Increase self-confidence through the application of coursework knowledge.
- Prepare for entry-level work in an accounting setting.

Financial Planning — 2 Credits/60 Clock-Hours

The Financial Planning course provides a foundation in personal finances. Students will practice budgeting and investing techniques. Upon successful completion of this course, students will be able to communicate effectively about money.

Objectives:

- Analyze personal financial position.
- Set short- and long-term goals.
- Use money management techniques to make sound financial decisions.

Social Media Marketing — 2 Credits/60 Clock-Hours

The Social Media Marketing course introduces basic marketing principles using social media platforms. Students will be exposed to valuable tools, tips, and practices that promote optimal marketing results. Students will be able to demonstrate effective marketing principles for a business.

Objectives:

- Create a social media marketing strategy.
- Track and analyze the effectiveness of online marketing efforts.
- Use the 4 Ps process to develop products and services.

Introduction to Sales — 1 Credit/30 Clock-Hours

The Introduction to Sales course provides a knowledge and understanding of the career opportunities in the sales industry. Students will learn the ethics involved in sales, how to approach and sell to different personality types, and the basics of using customer relationship management (CRM) software.

Objectives:

- Understand the sales industry.
- Explore sales ethics.
- Evaluate prospective and types of customers.
- Research CRM systems.

Sales Techniques and Presentations — 2 Credits/60 Clock-Hours

The Sales Techniques and Presentations course emphasizes the necessary skills to create and execute an effective sales pitch in different sales environments. Students will practice determining customer needs and overcoming objections when selling. Students will demonstrate fundamental selling techniques and negotiations required for success in sales. Students will also develop the necessary skills to deliver an effective presentation.

Objectives:

- Understand marketing and how social media is used in today’s world.
- Apply supply and demand forces as it relates to consumer and audience behavior.
- Use Facebook, Google, and Twitter to learn how these social media platforms market.
- Learn how advertising and promotion play an important role in marketing.
- Create a marketing strategy that will drive consumers to purchase.

Advanced Keyboarding — 1 Credit/30 Clock-Hours

The Advanced Keyboarding course is designed to help you develop proper keyboarding techniques with an emphasis on increasing keyboarding speed and accuracy to a minimum job-market level of 60 wpm. During this course, you will be given intensive skill building practice using drills and timed tests.

Objectives:

- Demonstrate ability to keyboard by touch.
- Perform keyboarding rate of 60 wpm on a five-minute timed writing with correction allowed.

Records Management — 3 Credits/90 Clock-Hours

The Records Management course explores how to work with dual records management systems to organize records in paper and electronic formats. Students will practice managing records in accordance with industry standards to facilitate correct storage procedures and timely retrieval rates.

Objectives:

- Identify basic records management concepts.
- Demonstrate indexing rules and filing procedures.
- Use appropriate records retention, transfer, and disposition.

Administrative Capstone — 1 Credit/30 Clock-Hours

The Administrative Capstone course integrates student knowledge and skills gained through previously completed coursework. Students will apply decision-making, critical-thinking, and problem-solving skills to complete realistic business projects. Students will demonstrate business office proficiency upon completion of this course.

Objectives:

- Demonstrate ability to work independently and efficiently.
- Use professionalism skills to communicate effectively.
- Increase self-confidence through the application of coursework knowledge.
- Prepare for entry-level work in a business office setting.

Business Externship — 2 Credits/90 Clock-Hours

The Business Externship course provides students with real-world work experience. Students will complete job-related activities as determined by the cooperating employer. Upon successful completion of this course, students will have practiced and mastered employer-set objectives, which may lead to employment.

Objectives:

- Demonstrate professional work habits.
- Apply knowledge and skills learned throughout the program.
- Accept employer feedback and improve accordingly.
- Perform self-evaluation on externship experience.

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Ogden-Weber

Presentations — 2 Credits/60 Clock-Hours

The Presentations course explores developing and creating professional electronic presentations. Students will practice adding visual elements, formatting slides, incorporating audio and video elements, and saving and sharing files

Objectives:

- Explore professionalism in presentations.
- Create professional presentations.
- Operate common electronic presentation software.
- Demonstrate use of graphics, formatting, animations, and transitions to enhance a presentation.

Accounting I — 2 Credits/60 Clock-Hours

The Accounting I course introduces the basic principles and language of accounting. Students will demonstrate record-keeping concepts, including analyzing, journalizing, and posting transactions for a service-based business. Students will complete the entire accounting cycle, close the books, and make correcting entries.

Objectives:

- Perform all stages of the accounting cycle.
- Create and analyze financial reports.
- Demonstrate best practices for ethical and accurate accounting.

Computerized Accounting — 3 Credits/90 Clock-Hours

The Computerized Accounting course introduces students to software available for automating accounting functions. Students set up and maintain the financial processes within a business.

Objectives:

- Use accounting software to set up a company and perform all stages of the accounting cycle.
- Use accounting software to create and analyze financial reports.
- Use accounting software to customize business documents, forms, reports, and graphs.
- Demonstrate best practices for ethical and accurate accounting.

Marketing I — 3 Credits/90 Clock-Hours

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

Sales Fundamentals **2 Credits/60 Clock-Hours**

The Sales Fundamentals course introduces the fundamentals of personal selling and persuasion as students explore how to develop strong customer relationships, build trust, and identify ethical selling practices. Students will examine types of buyers and the buying process, and opportunities in the modern sales industry.

Objectives:

- Describe personal selling and alternative selling approaches.
- Explain the sales process and sales ethics.
- Identify types of buyers and describe the buying process.

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.
- Project business costs and revenue.

Accounting II **2 Credits/60 Clock-Hours**

The Accounting II course expands upon the basic principles of accounting. Students will demonstrate bookkeeping concepts, including analyzing, journalizing, and posting transactions for a merchandising business. Students will complete the entire accounting cycle using special journals and classified financial statements.

Objectives:

- Perform all stages of the accounting cycle.
- Analyze and post transactions in special journals.
- Explore the payroll process.
- Calculate costs of goods sold for inventory.
- Demonstrate best practices for ethical and accurate accounting.

Social Media Marketing **2 Credits/60 Clock-Hours**

The Social Media Marketing course introduces basic marketing principles using social media platforms. Students will be exposed to valuable tools, tips, and practices that promote optimal marketing results. Students will be able to demonstrate effective marketing principles for a business.

Objectives:

- Create a social media marketing strategy.
- Track and analyze the effectiveness of online marketing efforts.
- Use the 4 Ps process to develop products and services.

Fundamentals of Human Resources **2 Credits/60 Clock-Hours**

The Human Resource Management (HRM) course focuses on recruitment, talent acquisition, employee development, performance management, and HRM policies. Students will explore HRM best practices to

enhance productivity, foster a positive work culture, and develop an understanding in EEO practices, training, performance appraisal, and compensation.

Objectives:

- Apply the principles of EEO and Safe Workplace in an organization.
- Demonstrate knowledge of performance management, employee reviews, employee separation, and compensation/benefits structures.
- Summarize major state and federal laws and agencies that govern employment practices and explain employers' duties under OSHA.
- Explain HRM responsibilities involved in recruiting, acquiring, training, and developing people.

Principles of Leadership **2 Credits/60 Clock-Hours**

The Principles of Leadership course explores effective conflict management skills and teaches how to establish a constructive culture by applying of appropriate leadership philosophies and styles. Students will develop leadership characteristics through self-evaluation activities, practice scenarios, and case studies.

Objectives:

- Use current leadership theories and develop leadership characteristics.
- Practice leadership through self-reflection and action exercises.
- Demonstrate ability to improve leadership performance through practice exercises.
- Use effective conflict management and establish a constructive organizational culture.
- Apply leadership philosophy and identify different leadership styles.

Project Management Essentials **2 Credits/60 Clock-Hours**

The Project Management Essentials course examines project initiation, planning, stakeholder strategies, cost projections, staffing, quality management, and performance monitoring. Upon successful completion of this course students will be able to demonstrate industry-level competency in the fundamentals of project management.

Objectives:

- Develop project proposals.
- Identify and manage risks.
- Understand resource utilization in business applications.
- Use communication and documentation to create a strong organization.

Customer Relationship Management **2 Credits/60 Clock-Hours**

The Customer Relationship Management course examines customer relationship management (CRM) and its application in marketing, sales, and service. Students will explore CRM foundations and gain an understanding of the processes involved by using CRM software.

Objectives:

- Explore the foundations of effective customer relationship management.
- Apply effective CRM to marketing, sales, and service scenarios.
- Create CRM processes to develop customer loyalty.
- Use a CRM software platform to carry out tasks.

Records Management **2 Credits/60 Clock-Hours**

The Records Management course explores how to work with dual records management systems to organize records in paper and electronic formats. Students will practice managing records in accordance with industry standards to facilitate correct storage procedures and timely retrieval rates.

Objectives:

- Identify basic records management concepts.
- Demonstrate indexing rules and filing procedures.
- Use appropriate records retention, transfer, and disposition.

Tooele

Presentations **2 Credits/60 Clock-Hours**

The Presentations course explores developing and creating professional electronic presentations. Students will practice adding visual elements, formatting slides, incorporating audio and video elements, and saving and sharing files.

Objectives:

- Explore professionalism in presentations.
- Create professional presentations.
- Operate common electronic presentation software.
- Demonstrate use of graphics, formatting, animations, and transitions to enhance a presentation.

Accounting I **2 Credits/60 Clock-Hours**

The Accounting I course introduces the basic principles and language of accounting. Students will demonstrate record-keeping concepts, including analyzing, journalizing, and posting transactions for a service-based business. Students will complete the entire accounting cycle, close the books, and make correcting entries.

Objectives:

- Perform all stages of the accounting cycle.
- Create and analyze financial reports.
- Demonstrate best practices for ethical and accurate accounting.

Computerized Accounting **3 Credits/90 Clock-Hours**

The Computerized Accounting course introduces students to software available for automating accounting functions. Students set up and maintain the financial processes within a business.

Objectives:

- Use accounting software to set up a company and perform all stages of the accounting cycle.
- Use accounting software to create and analyze financial reports.
- Use accounting software to customize business documents, forms, reports, and graphs.
- Demonstrate best practices for ethical and accurate accounting.

Advanced Word Processing — 2 Credits/60 Clock-Hours

The Advanced Word Processing course focuses on advanced techniques used to create and manage professional documents. Students will expand upon editing and formatting practices and specialized software features.

Objectives:

- Apply advanced collaboration tools.
- Use advanced tools to manipulate documents.
- Automate repetitive tasks to save time and effort.

Advanced Spreadsheet Applications — 3 Credits/90 Clock-Hours

The Advanced Spreadsheets course focuses on advanced spreadsheet features used to further enhance worksheets. Students will expand formula applications and utilize analysis tools.

Objectives:

- Apply advanced formatting techniques and functions.
- Use collaboration features.
- Use advanced tools to forecast data outcomes.
- Automate repetitive tasks.

Database Applications — 2 Credits/60 Clock-Hours

The Database Applications course focuses on the design and creation of databases and introduces the application of database capabilities for information management and data manipulation. Students will learn how to design, create, manipulate, extract, and present data using Microsoft Access. Also, this course provides students with more advanced skills in database design and creation, data extraction and presentation, database relationships, and data interconnectivity. This course prepares students to take the MOS Certification Exam for Access.

Objectives:

- Use Database Software to overview and begin managing Databases.
- Use Database Software to construct and manage Databases by creating Tables, Queries, Reports and Forms.
- Explore some Advanced Tables and create simple queries.
- Prepare for the Comprehensive Certification Exam for Access.

Accounting II — 2 Credits/60 Clock-Hours

The Accounting II course expands upon the basic principles of accounting. Students will demonstrate bookkeeping concepts, including analyzing, journalizing, and posting transactions for a merchandising business. Students will complete the entire accounting cycle using special journals and classified financial statements.

Objectives:

- Perform all stages of the accounting cycle.
- Analyze and post transactions in special journals.
- Explore the payroll process.
- Calculate costs of goods sold for inventory.
- Demonstrate best practices for ethical and accurate accounting.

Personal Information Management **1 Credit/30 Clock-Hours**

The Personal Information Management course focuses on basic Email features used in creating, sending, and receiving E-mail messages in Outlook. Practical business applications involving managing Email messages, contacts, tasks, notes, and journal entries, as well as using the calendar features, will be covered. This course prepares students to take the MOS Exam for Outlook.

Objectives:

- Use E-mail/Personal Management Software (MS Outlook) to send and receive electronic messages.
- Use E-mail/Personal Management Software (MS Outlook) to manage messages and organize calendars.
- Use E-mail/Personal Management Software (MS Outlook) to organize and group contacts.
- Prepare for the Comprehensive Certification exam for Outlook.

Advanced Keyboarding **1 Credit/30 Clock-Hours**

The Advanced Keyboarding course is designed to help you develop proper keyboarding techniques with an emphasis on increasing keyboarding speed and accuracy to a minimum job-market level of 60 wpm. During this course, you will be given intensive skill building practice using drills and timed tests.

- Objectives:
- Demonstrate ability to keyboard by touch.
- Perform keyboarding rate of 60 wpm on a five-minute timed writing with correction allowed.

Management Externship **1 Credit/45 Clock-Hours**

Interns will practice professionalism and effective communication by interacting with both staff and students. They will learn the responsibilities of the different departments of an organization to ensure the effectiveness of the intern in a management position.

Objectives:

- The intern will assist the different departments in accomplishing their projects.
- This unpaid internship reports directly to the Department Managers on a project-by-project basis. The Department Managers will sign off the intern's effectiveness, efficiency, organizational skills, planning and time management skills.
- Operate appropriate software applications for administrative support.

Uintah Basin

Presentations **2 Credits/60 Clock-Hours**

The Presentations course explores developing and creating professional electronic presentations. Students will practice adding visual elements, formatting slides, incorporating audio and video elements, and saving and sharing files.

Objectives:

- Explore professionalism in presentations.
- Create professional presentations.
- Operate common electronic presentation software.
- Demonstrate use of graphics, formatting, animations, and transitions to enhance a presentation.

Utah System of Higher Education
Business
FY2026 / 19 Credits (570 Clock-Hours)

Accounting I — 2 Credits/60 Clock-Hours

The Accounting I course introduces the basic principles and language of accounting. Students will demonstrate record-keeping concepts, including analyzing, journalizing, and posting transactions for a service-based business. Students will complete the entire accounting cycle, close the books, and make correcting entries.

Objectives:

- Perform all stages of the accounting cycle.
- Create and analyze financial reports.
- Demonstrate best practices for ethical and accurate accounting.

Management Principles — 2 Credits/60 Clock-Hours

The Management Principles course will address strategies related to starting, owning, operating, and growing a small business. Students will explore marketing, financial management, leadership, ethics, and growth opportunities.

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.

Marketing I — 3 Credits/90 Clock-Hours

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

Sales Fundamentals — 2 Credits/60 Clock-Hours

The Sales Fundamentals course introduces the fundamentals of personal selling and persuasion as students explore how to develop strong customer relationships, build trust, and identify ethical selling practices. Students will examine types of buyers and the buying process, and opportunities in the modern sales industry.

Objectives:

- Describe personal selling and alternative selling approaches.
- Explain the sales process and sales ethics.
- Identify types of buyers and describe the buying process.

November 03, 2023
Adjusted: October 31, 2024

Special Applications **2 Credits/60 Clock-Hours**

The Special Applications course provides students with unique or advanced skill development needed in current occupational industry. Students will select a course and draft a proposal defining its relation to the Business certificate. Upon completion of this course, students will review success of the course compared to the proposal. Credit will be given in increments up to 180 hours. Requires approval.

Objectives:

- Create a professional proposal.
- Define criteria that relates to certificate course.
- Apply decision-making, critical-thinking, and problem-solving skills.

USU - Eastern

Presentations **2 Credits/60 Clock-Hours**

The Presentations course explores developing and creating professional electronic presentations. Students will practice adding visual elements, formatting slides, incorporating audio and video elements, and saving and sharing files.

Objectives:

- Explore professionalism in presentations.
- Create professional presentations.
- Operate common electronic presentation software.
- Demonstrate use of graphics, formatting, animations, and transitions to enhance a presentation.

Accounting I **2 Credits/60 Clock-Hours**

The Accounting I course introduces the basic principles and language of accounting. Students will demonstrate record-keeping concepts, including analyzing, journalizing, and posting transactions for a service-based business. Students will complete the entire accounting cycle, close the books, and make correcting entries.

Objectives:

- Perform all stages of the accounting cycle.
- Create and analyze financial reports.
- Demonstrate best practices for ethical and accurate accounting.

Computerized Accounting **3 Credits/90 Clock-Hours**

The Computerized Accounting course introduces students to software available for automating accounting functions. Students set up and maintain the financial processes within a business.

Objectives:

- Use accounting software to set up a company and perform all stages of the accounting cycle.
- Use accounting software to create and analyze financial reports.
- Use accounting software to customize business documents, forms, reports, and graphs.
- Demonstrate best practices for ethical and accurate accounting.

Management Principles — 2 Credits/60 Clock-Hours

The Management Principles course will address strategies related to starting, owning, operating, and growing a small business. Students will explore marketing, financial management, leadership, ethics, and growth opportunities.

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.

Marketing I — 3 Credits/90 Clock-Hours

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

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.
- Project business costs and revenues.

Accounting II — 2 Credits/60 Clock-Hours

The Accounting II course expands upon the basic principles of accounting. Students will demonstrate bookkeeping concepts, including analyzing, journalizing, and posting transactions for a merchandising business. Students will complete the entire accounting cycle using special journals and classified financial statements.

Objectives:

- Perform all stages of the accounting cycle.
- Analyze and post transactions in special journals.
- Explore the payroll process.
- Calculate costs of goods sold for inventory.
- Demonstrate best practices for ethical and accurate accounting.

Accounting III — 2 Credits/60 Clock-Hours

The Accounting III course exposes students to managerial accounting and decision making. Students will explore departmental financial statements, inventory valuation methods, and horizontal and vertical analyses. Students will demonstrate sound financial decision-making processes for business.

Objectives:

- Compute ratios and rates to determine financial health of a business.
- Apply depreciation methods to account accurately for assets.
- Demonstrate best practices for ethical and accurate accounting.

Business Externship — 1-3 Credits/45-135 Clock-Hours

The Business Externship course provides students with real-world work experience. Students will complete job-related activities as determined by the cooperating employer. Upon successful completion of this course, students will have practiced and mastered employer-set objectives, which may lead to employment.

Objectives:

- Gain industry experience.
- Demonstrate professional work habits.
- Apply knowledge and skills learned throughout the program.
- Accept employer feedback and improve accordingly.
- Perform self-evaluation on externship experience.

Web Business — 3 Credits / 90 Clock-Hours

The Web Business 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.

UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Collision Repair Technology
FY2026 / 34 Credits (1020 Clock-Hours)

Collision Repair Technology

Institutions: Bridgerland, Dixie, Salt Lake

Technical Certificate (Catalog Year: 2026, 34 Credits/1020 Clock-Hours Required, CIP: 47.0603)

Foundational Courses (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 and 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, and Electronics	4	120

March 24, 2023
Adjusted: October 31, 2024

Utah System of Higher Education
Collision Repair Technology
FY2026 / 34 Credits (1020 Clock-Hours)

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's 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 and matching, paint application, paint defects (causes and cures), and final detail.
- Demonstrate correct welding techniques for each assigned auto body repair procedure.
- Demonstrate proficiency in collision repair estimating, damage analysis, and electronics tools.
- Use effective communication and critical-thinking skills to solve problems and implement solutions.

FOUNDATIONAL COURSE DESCRIPTIONS

Introduction to Collision Repair and Safety **1 Credit/30 Clock-Hours**

In the Introduction to Collision Repair and Safety course, students learn about the safety requirements and tools located within the shop and how to use safe practices when they enter the field. Students learn industry related safety training, and they must complete it before entering the shop area to work. Students go through a stringent safety program. In this course they learn the safety procedures as they apply within the lab areas working with shop tools as well as hazardous materials.

Objectives:

- Wear appropriate personal protective equipment in the lab including safety glasses and the proper uniform.
- Complete the safety course training with a passing score.
- Demonstrate proper use of hand tools used in the Collision Repair Technology program.
- Explain proper handling of hazardous materials.
- Complete the relevant online curriculum.

Collision Basic Structural Repair **4 Credits/120 Clock-Hours**

In the Collision Basic Structural Repair course, students learn the basic skills of how to be a steel structural technician. Students restore vehicle dimensions and structural integrity to collision-damaged vehicles. They use 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. Students also work with a variety of metals and repair corrosion. Students learn the structural technician's duties perform them.

Objectives:

- Practice personal collision repair safety daily in all collision repair processes.
- Use hand and power tools used in the collision repair program.
- Effectively diagnose structural damage using a computerized measuring system.
- Determine if a part needs to be repaired or replaced and which is most cost effective.
- Decipher computerized body openings measurements.
- Demonstrate the set up and use of a tram (Bar) gauge.

Collision Basic Non-Structural Repair **4 Credits/120 Clock-Hours**

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

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 which is more cost effective.
- Define trim and bolted parts terminology.
- Remove and install bolted-on panels.

Collision Surface Preparation I **4 Credits/120 Clock-Hours**

The Collision Surface Preparation I course provides students with an overview of auto collision surface preparation. Students learn how to properly prepare surfaces on vehicles for repair and refinishing. The class covers proper sanding as well as tools and materials used in the process. Through demonstrations and hands-on practice, students develop the skills necessary to achieve professional results.

Objectives:

- Identify and describe the necessary tools and materials used in surface preparation.
- Follow safety procedures relevant to surface preparation.
- Demonstrate trim, stripe, and vinyl removal and masking techniques.
- Perform the appropriate preparation techniques for a variety of surface substrates.
- Use the appropriate cleaning products for a variety of substrates.
- Demonstrate techniques for removing or preparing existing finishes.
- Evaluate the quality of existing finishes.
- Demonstrate proper body filler applications.

Collision Basic Refinishing **4 Credits/120 Clock-Hours**

In the Collision Basic Refinishing course, students learn methods of basic panel preparation and refinishing. Students practice different types of undercoating including sealers and primers, their use, limitations, and application. Students learn skills with refinish products, use and maintain shop paint spray equipment, along with prevention of refinishing processing defects.

Objectives:

- Practice refinishing safety and implement those skills.
- Safely operate the paint mixing system and manage its features.
- Address problems when painting vehicle substrates.
- Practice skills of priming and painting techniques using numerous primers, sealers, and ground coats affect refinishing.
- Identify and explain the different types of finishes and the correct procedures to prepare them for refinishing.
- Apply seam sealers to various areas on a vehicle.
- Apply undercoating and protectants to areas on a vehicle.

Collision Repair Shop Operations and Career Success **1 Credit/30 Clock-Hours**

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

Objectives:

- Display responsible and professional behaviors for a work environment.
- 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.

Collision Surface Preparation II **4 Credits/120 Clock-Hours**

The Collision Surface Preparation II course builds on the techniques taught in Collision Surface Preparation I. Students learn to properly and safely prepare surfaces prior to painting. Students will practice setup, operation techniques, materials selection, and safety considerations for painting surfaces. Upon completion of the course, students have a solid foundation in auto collision surface preparation.

Objectives:

- Demonstrate safe handling, proper application technique, and calibration of a paint gun.
- Demonstrate proper procedures for masking and taping, including window and trim protection.
- Select proper grit for repair and blend adhesion.
- Determine whether masking or part removal is appropriate.
- Identify types of finishes for various applications.
- Prepare a variety of surfaces for paint application.

Collision Advanced Refinishing **4 Credits/120 Clock-Hours**

In this Collision Advanced Refinishing course, students train on the advanced methods of painting. Students also learn how to do advanced painting techniques and utilize problem-solving techniques 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.
- Explain how surface preparation affects refinishing.
- Detail the inside and outside of a vehicle.
- Cut, de nib, and polish vehicle panels.
- Demonstrate color blending techniques.

Collision Plastic Welding and Adhesives **4 Credits/120 Clock-Hours**

In this Collision Plastic Welding and Adhesives course, students learn how to identify different types/kinds of plastics and proceed through the plastic welding processes. Students identify and use adhesives. Students also 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 using heat.
- 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 adhesives are used on vehicles.
- Apply seam sealers to various areas on a vehicle.

Collision Repair Estimating, Damage Analysis, and Electronics **4 Credits/120 Clock-Hours**

In the Collision Repair, Estimating, Damage Analysis, and Electronics course students learn how to correctly, effectively analyze damage to a vehicle and write computerized estimates. Students train on a visual evaluation of the primary, secondary, and previous damages on a vehicle. Students formulate a computerized estimate for a damaged vehicle. Students learn the estimator's, technician's, and refinisher's roles and expectations. Parts resourcing, insurance company roles, and customer relations are also integrated in this course.

Objectives:

- Identify visual damage to a vehicle.
- Analyze damage to a vehicle.
- Discuss collision repair estimating and vehicle terminology.
- Write a handwritten and a computerized estimate for a damaged vehicle.
- 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.
- Demonstrate how to book out a vehicle for its actual cash value (ACV).

UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Culinary Arts
FY2026 / 18 Credits (540 Clock-Hours)

Culinary Arts

Institutions: Bridgerland, Davis, Dixie, Mountainland, Ogden-Weber, Snow, Southwest, Uintah Basin

Technical Certificate (Catalog Year: 2026, 18 Credits/540 Clock-Hours Required, CIP: 12.0503)

Foundational Courses (18 Credits/540 Clock-Hours)		**Credits**	**Clock-Hours**
TECA 1000	Sanitation and Safety	1	30
TECA 1010	Introduction to Culinary Arts	1	30
TECA 1020	Culinary Math	1	30
TECA 1100	Culinary I	3	90
TECA 1110	Culinary Techniques	3	90
TECA 1200	Soups, Stocks, and Sauces	3	90
TECA 1400	Garde Manger – Cold Kitchen	3	90
TECA 1500	Baking I	3	90
Supplemental Courses			
Bridgerland (10 Credits/360 Clock hours)			
TECA 1210	World Cuisine	2	60
TECA 1220	Flavor Essentials	1	30
TECA 1230	Artisan Methods	2	60
TECA 1240	Pastas and Grains	2	60
TECA 1510	Pastries and Desserts	2	60
TECA 1600	Baking II	2	60
TECA 1700	Restaurant Practical	3	90
TECA 1800	Job Seeking Skills	1	30
TECA 2901	Special Applications	2-3	90-135
TECA 2998	Line Cooking/Café Management	1	45
TECA 2999	Catering	1	45
Davis (12 Credits/360 Clock hours)			
TECA 1030	Exploratory Culinary	1	30
TECA 1250	Vegetables, Grains, and Starches	2	60
TECA 1410	Advanced Garde Manger	2	60
TECA 1610	Advanced Baking – Pastries	2	60
TECA 1615	Advanced Baking – Cakes	2	60
TECA 1730	Line Cooking	2	60
TECA 1800	Job Seeking Skills	1	30
Dixie (12 Credits/360 Clock hours)			
TECA 1120	Culinary II	4	120
TECA 1210	World Cuisine	2	60
TECA 1710	Introduction to Restaurant Practical	1	30
TECA 1720	Banquets and Catering	4	120
TECA 1800	Job Seeking Skills	1	30
Mountainland (11 Credits/360 Clock hours)			
TECA 1130	Advanced Culinary Techniques	2	60
TECA 1210	World Cuisine	2	60
TECA 1600	Baking II	2	60
TECA 1800	Job Seeking Skills	1	30
TECA 1810	Front of House Restaurant Management	1	30
TECA 1820	Nutrition	1	30
TECA 1920	Culinary Arts Externship	2	90
Ogden-Weber (12 Credits360 Clock hours)			
TECA 1210	World Cuisine	2	60

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FY2026 / 18 Credits (540 Clock-Hours)

TECA 1300	Hors d'oeuvres	2	60
TECA 1310	Brunch	2	60
TECA 1420	Garde Manger II	3	90
TECA 1520	Pies and Pastries	2	60
TECA 1530	Cakes and Frostings	2	60
TECA 1540	Custards and Frozen Desserts	2	60
TECA 1620	Advanced Yeast Breads	2	60
TECA 1800	Job Seeking Skills	1	30
TECA 1840	Food Purchasing and Budgets	2	60
TECA 1930	Culinary Arts Special Projects	1	45
TECA 1940	Culinary Arts Externship	1	45
Snow (11 Credits/330 Clock hours)			
TECA 1210	World Cuisine	2	60
TECA 1250	Vegetables, Grains, and Starches	2	60
TECA 1600	Baking II	2	60
TECA 1730	Line Cooking	2	60
TECA 1800	Job Seeking Skills	1	30
TECA 1830	ServSafe Food Managers Course	1	30
TECA 2000	Food Truck Management	1	30
Southwest (12 Credits/390 Clock hours)			
TECA 1210	World Cuisine	2	60
TECA 1220	Flavor Essentials	1	30
TECA 1240	Pastas and Grains	2	60
TECA 1600	Baking II	2	60
TECA 1630	Custom Baking Service	1	30
TECA 1800	Job Seeking Skills	1	30
TECA 1830	ServSafe Food Managers Course	1	30
TECA 1920	Culinary Arts Externship	2	90
Uintah Basin (12 Credits/360 Clock hours)			
TECA 1210	World Cuisine	2	60
TECA 1250	Vegetables, Grains, and Starches	2	60
TECA 1610	Advanced Baking – Pastries	2	60
TECA 1730	Line Cooking	2	60
TECA 1740	Banquet Service/Catering	1	30
TECA 1800	Job Seeking Skills	1	30
TECA 1850	Menu Design and Inventory Controls	2	60

March 22, 2024
Adjusted October 31, 2024

Utah System of Higher Education
Culinary Arts
FY2026 / 18 Credits (540 Clock-Hours)

PROGRAM DESCRIPTION

The Culinary Arts program prepares students by teaching the fundamental principles and techniques of professional cooking and baking. Students learn through classroom lectures, guest speakers, presentations, and hands-on activities for commercial kitchens. Students learn, develop, and test their skills by using different cooking methods to cook vegetables, starches, proteins, soups, sauces, and many other foods. They also develop and test their skills in baking breads, cakes, cookies, pastries, pies, and more.

Objectives:

- Receive state-approved food safety management certification.
- Demonstrate kitchen safety in a professional environment.
- Define key culinary terms, processes, and methods.
- Demonstrate customer service and guest hospitality.
- Demonstrate professionalism through repetition by preparing and plating foods daily.
- Preparing classic dishes using appropriate cooking principles.

FOUNDATIONAL COURSE DESCRIPTIONS

Sanitation and Safety — 1 Credit/30 Clock-Hours

The Sanitation and Safety course introduces students to the importance of food safety and sanitation in the kitchen. Students learn how to recognize and prevent hazards that can cause food-borne illnesses. It covers how to store and handle food and equipment, including the use of sanitizers and prevention of cross contamination. The course introduces regulations related to food safety and sanitation.

Objectives:

- Identify microorganisms related to food spoilage and food-borne illnesses; describe their requirements and methods for growing.
- Demonstrate acceptable procedures when preparing potentially hazardous foods, including time/temperature principles.
- Demonstrate good personal hygiene and health habits.
- Identify the Hazard Analysis Critical Control Points (HAACP) during all food handling processes as a method for minimizing the risk of food-borne illness.
- Define appropriate responses to kitchen injuries.

Introduction to Culinary Arts — 1 Credit/30 Clock-Hours

The Introduction to Culinary Arts course explores the careers available in the food service industry. Students learn how to identify, prepare, and combine ingredients for a well-balanced diet, as well as learn about nutrients and dietary substitutions for food allergies. Through hands-on activities, students practice the basic techniques used in cooking, with an emphasis on presentation. Students who complete this course will have a comprehensive understanding of the fundamentals behind a successful culinary career.

Objectives:

- Explain the hospitality industry's philosophy and its role in providing customer service.
- Examine professional career opportunities in the hospitality and foodservice industry.
- Explain the primary characteristics, functions, and major food sources for major nutrients.

- Identify common food allergies and identify appropriate substitutions.
- Examine the importance of sustainable practices in a foodservice operation.

Culinary Math **1 Credit/30 Clock-Hours**

The Culinary Math course teaches students the basics of math as it relates to the culinary field. In this course, students learn how to cost recipes and develop yield formulas, as well as practice fraction skills. Through lectures, demonstrations, and in-class problem solving, students practice a variety of math principles such as fractions, decimals, and baker percentages needed for success in the culinary industry.

Objectives:

- Perform basic math functions to include fractions, weights, and measurements.
- Calculate the correct cost of a recipe, including the overall cost, individual cost, and menu sales price.
- Determine selling price based on calculated food costs using current technology.
- Modify recipes using a yield formula to increase and decrease quantities.
- Generate an overall food-cost percentage by examining inventory/ordering.

Culinary I **3 Credits/90 Clock-Hours**

The Culinary I course introduces students to knife skills, and the tools and common equipment used in the kitchen. Students practice knife skills and classical cuts. The course provides instruction and practice for mise en place and organizing a kitchen, as well preparing different vegetables, grains, and starches. Basic herbs, spices, seasonings, and cooking techniques are also covered.

Objectives:

- Identify tools and equipment used in a professional kitchen and demonstrate proper handling of these items to include safety, sanitation, and storage.
- Demonstrate knife proficiency to achieve quality results when producing classical knife cuts used in various food preparation and cooking.
- Identify, describe, and utilize herbs, spices, and seasonings.
- Explain Mise en Place and demonstrate a combination of organizational skills, preparedness, and timing when it comes to seasonings and flavors when preparing and cooking food.
- Evaluate and analyze the preparation of a variety of vegetables, legumes, grains, and starches using a variety of cooking methods.

Culinary Techniques **3 Credits/90 Clock-Hours**

The Culinary Techniques course teaches the essential techniques used in the professional kitchen. Students practice breaking down, preparing, and cooking poultry as well as fish. Fabrication methods for beef, lamb, and game are also taught.

Objectives:

- Execute proper poultry fabrication.
- Identify a variety of poultry and how they are used.
- Demonstrate cooking poultry using a variety of cooking methods.
- Identify and prepare a variety of fish, shellfish, and crustaceans.
- Identify and explain various fabrication methods for beef, lamb, pork, and game as available.

Soups, Stocks, and Sauces **3 Credits/90 Clock-Hours**

The Soups, Stocks, and Sauces course introduces students to the fundamentals of cooking quality soups, stocks, and sauces. A variety of preparation techniques and ingredients are explored. Topics include understanding the importance of mirepoix, making soups, and thickening sauces.

Objectives:

- Explain the process for making classical stocks.
- Produce and use various methods for thickening.
- Produce a variety of classic soups.
- Produce the five classic mother sauces.
- Produce a variety of small sauces.

Garde Manger – Cold Kitchen **3 Credits/90 Clock-Hours**

The Garde Manger-Cold Kitchen course teaches the fundamentals of the cold kitchen. Students gain an understanding of the pantry, sandwich and salad preparation and other common dishes found under Garde Manager skills.

Objectives:

- Identify and prepare a variety of salads.
- Identify and prepare a variety of dressings and emulsions.
- Identify and prepare an assortment of hot and cold sandwiches.
- Explain the importance of food preservation techniques.
- Demonstrate proficiency using knives and other tools to achieve professional quality results working with vegetables, fruits, garnishes, and other decorative and edible purposes.
- Discuss the flow of goods in a foodservice operation including ordering, receiving, and storing.
- Define, describe, and explain the importance of a par system.
- Define FIFO and explain how it is used to effectively maintain proper storage procedures.

Baking I **3 Credits/90 Clock-Hours**

The Baking I course teaches students basic bakery principles that are fundamental for success in any food industry career. The course outlines the basic ingredients and mixing methods that make up the majority of baked goods. Learn to create pie doughs and basic pastries. Mixing techniques along with the appropriate types of crusts to be used with their subsequent fillings are demonstrated. The correct equipment and baking procedures. This course also teaches basic quick breads, muffins, and cake mixing methods.

Objectives:

- Identify baking ingredients and explain their basic function in the formulation of baking and pastry recipes.
- Identify and demonstrate different mixing methods used in baking.
- Demonstrate proper use of baking scale and measuring of wet and dry ingredients.
- Identify and prepare various types of quick breads and yeast breads.
- Identify and prepare various pies and cookies.
- Prepare a variety of cakes utilizing the various mixing methods and finish each cake with a variety of icings or toppings.

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SUPPLEMENTAL COURSE DESCRIPTIONS

Bridgerland

World Cuisine **2 Credits/60 Clock-Hours**

This World Cuisine course teaches students about the vast array of ingredients and flavors found Throughout the world. Demonstrations on some regional and international dishes are given by the instructor. Using the same cooking principles that students have learned, they are able to cook with different herbs and spices from around the country to create some regional dishes.

Objectives:

- Demonstrate a variety of cooking methods using specific ingredients from a certain region.
- Examine different regions and gain a basic knowledge of the history of the cuisine.
- Construct dishes using regional and international flavors.
- Explain how geography and culture affect the regional cuisine.
- Build visually appealing and balanced plates from specific regions from around the country and the world.

Flavor Essentials **1 Credit/30 Clock-Hours**

The Flavor Essentials course teaches students the importance of working with flavors and seasonings. Students learn about sustainability and when different fruits and vegetables are in season to best utilize their flavor. Students work on plating, advanced flavor, and seasoning.

Objectives:

- Combine flavor and seasoning profiles.
- Demonstrate the ability of working with seasonal fruits and vegetables.
- Determine proper use of fresh herbs and spices.
- Demonstrate proper plating.

Artisan Methods **2 Credits/60 Clock-Hours**

The Artisan Methods course teaches students the basics of bread making using artisan methods. The history of grains prepares students to learn about the important fermentation processes that lend great flavor to the different types of bread they make. Several artisan techniques are taught, along with shaping and baking methods.

Objectives:

- Describe some of the characteristics of grains and flours used in artisan bread methods.
- Describe the fermentation process and explain how it changes the finished product.
- Practice different mixing methods and discuss how it affects the crumb texture.
- Create and keep a sourdough starter active.
- Produce products using various shaping methods.
- Construct laminated doughs (rolled-in) with different folding techniques.
- Discuss the differences in a variety of pre-ferments such as sponge/biga/polish and discuss how it affects the crumb texture.
- Produce "bucky" dough, such as bagels and pretzels with appropriate flavor variations.

Pastas and Grains **2 Credits/60 Clock-Hours**

The Pastas and Grains course teaches students about different types of starches including pasta and grains. Students learn the proper techniques in creating pasta dough and shaping for the desired finished product. Several methods of potato preparation are demonstrated. Rice/grain cooking methods are explained and demonstrated to the students.

Objectives:

- Prepare pasta dough and identify different shapes and uses of pasta.
- Identify grains and cook them using a variety of methods.
- Identify different types of rice and demonstrate a variety of methods to cook rice.
- Describe the role of starches and their place on a balanced plate.
- Identify different beans and legumes.

Pastries and Desserts **2 Credits/60 Clock-Hours**

The Pastries and Desserts course is hands-on and designed to provide students with the knowledge and skills needed to make delicious and attractive desserts. Through demonstrations, projects, and direct instruction, students learn to create classic cakes and modern desserts.

Objectives:

- Produce laminated doughs.
- Produce mousse with appropriate variations.
- Produce ice cream or sorbet using appropriate techniques and equipment.
- Build and decorate cakes with fondant effectively.
- Prepare dessert sauces.
- Compose a dessert plate that is visually appealing and served at the correct temperature.

Baking II **2 Credits/60 Clock-Hours**

The Baking II course expands the students' knowledge and skills and prepares them to work in a retail or industrial bakery. Students practice creating a variety of baked and dessert goods. Advanced bakery techniques are shared and practiced.

Objectives:

- Construct pies with appropriate crust and filling while being able to differentiate the filling methods.
- Produce puff and blitz pastry dough using proper roll-in and fold-in techniques.
- Cook sugar syrup to the seven different stages, avoiding crystallization.
- Produce pastry cream and baked custard.
- Examine the differences between a baked pudding and starch-thickened pudding.

Restaurant Practical **3 Credits/90 Clock-Hours**

The Restaurant Practical course teaches students how to manage the front of the house buffet, including set-up, staffing needs, time-management, and effective communication with the customer. The course also teaches the student how to manage sit-down and family-style meals. Students demonstrate time-management of food and personnel needs to meet the demands of an event.

Objectives:

- Execute proper setup and breakdown of a hot line/buffet in an organized manner.

- Demonstrate proper time management in a production setting.
- Demonstrate professionalism and proper communication while preparing food.
- Apply proper sanitation while preparing food.
- Demonstrate professional organizational standard.
- Demonstrate cost management.
- Identify basic principles of menu planning.
- Identify different menu types and how they are used in a foodservice operation.

Job Seeking Skills **1 Credit/30 Clock-Hours**

Job Seeking Skills explores how to prepare and successfully apply to potential career opportunities. During this course, you will be presented with essential job-seeking skills needed to find gainful employment.

Objectives:

- Create a professional resume, cover letter and reference sheet.
- Utilize online tools successfully to create an e-portfolio.
- Expand and develop networking skills.
- Utilize online resources effectively to find job openings.
- Demonstrate the ability to fill out job applications in a professional manner.
- Perform successfully in a job interview.
- Demonstrate appropriate follow-up procedures.

Special Applications **2-3 Credits/90-135 Clock-Hours**

A course providing competencies that meet an immediate occupational need beyond the skills available in the program's currently approved outline. The need, competencies, and length have been specified and documented by the employer advisory committee to meet current industry needs.

Objectives:

- These will be determined on an individual course basis and will be made known to the student upon instructor approval of the course to be taken or the skill to be developed.
- Complete all other objectives in the course, as defined by the instructor.

Line Cooking/Café Management **1 Credit/45 Clock-Hours**

The Line Cooking/Cafe Management course teaches food preparation and service for short order. Students learn what a par stock is and help in the day-to-day preparation. Students use First in First Out (FIFO) techniques, and the sales of popular items in planning a food preparation schedule. Students learn important aspects of taking customer orders, service, and presentation of food in a hands-on line cooking experience.

Objectives:

- Plan proper holding temperatures for food without damaging quality.
- Plan for the day using FIFO techniques.
- Construct a par inventory level for the cafe using sales and inventory data.
- Present customers with their meals.
- Demonstrate proper daily use, and cleaning of grill and fryer equipment.
- Operate a basic point-of-sale system.
- Produce breakfast items efficiently and without mistakes.

- Produce lunch items efficiently and without mistakes.

Catering **1 Credit/45 Clock-Hours**

The Catering course teaches students best practices for time and food management, along with service techniques. Students learn to assign tasks to team members. Students are taught accurate plate pricing for a catering event with effective customer communication and interaction.

Objectives:

- Calculate food costs.
- Plan and time food courses for a catering event.
- Schedule team members to perform catering services and tasks.
- Practice taking and confirming customer menus and scheduling their catering event.
- Interact effectively with customers.

Davis

Exploratory Culinary **1 Credit/30 Clock-Hours**

Exploratory Culinary offers an opportunity to explore a culinary topic of the student's choosing. Throughout this course, students will research an instructor-approved topic and find ways to apply this topic as well as talk to a local employer on how they utilize it. Students will find multiple recipes using the chosen topic and make a dish with them. At the end of this course, students will create and make an original recipe based on the approved topic.

Objectives:

- Identify a topic of interest.
- Explore the chosen topic.
- Determine methods, processes, and ingredients used.
- Explain what was learned.
- Prepare items identified by the research.

Vegetables, Grains, and Starches **2 Credits/60 Clock-Hours**

In this course, students will learn about different types of vegetables, grains, and starches as well as how to properly store, prepare, and serve them. Students will also gain a greater understanding of vegan/vegetarian diets and how they pertain to the industry.

Objectives:

- Identify and prepare a variety of vegetables.
- Identify and prepare a variety of potatoes.
- Demonstrate preparation and cooking of legumes, grains, pasta, and other starches.
- Demonstrate preparation and cooking for vegetarian diets.
- Prepare a variety of legumes, grains, pasta, and other starches.

Advanced Garde Manger **2 Credits/60 Clock-Hours**

This course further explores skills of Garde Manger. Students will prepare a variety of hors d'oeuvres including canapé, hummus, guacamole, antipasto, tapas, and bruschetta. Students also will prepare dips, cold hors d'oeuvres and other hors d'oeuvres as assigned. During this course, students will study curing, pickling, and sausages. Students also will explore how to make pâtés, terrines, and other cold foods.

Objectives:

- Prepare a variety of hors d' oeuvres.
- Define hors d' oeuvres and examine the different types.
- Identify different types of hors d' oeuvres and dips.
- Examine the process for curing and pickling.
- Explore making pates and terrines.

Advanced Baking – Pastries **2 Credits/60 Clock-Hours**

The Advanced Baking - Pastries course continues to explore baking skills with an emphasis on pastries and will focus on creating desserts that require more complex skills to develop than basic baking. In this course students will create and plate each dessert they make.

Objectives:

- Prepare a variety of pastries and deserts using different methods.
- Successfully prepare puff pastry or phyllo dough.
- Successfully prepare Pate a choux.
- Prepare different types of tarts.
- Prepare baked custards and puddings.
- Produce desserts using different types of custards, creams, and mousses.

Advanced Baking - Cakes **2 Credits/60 Clock-Hours**

This advanced baking continues to explore baking skills with an emphasis on cakes. Students will prepare a variety of cakes including pound cake, sponge cake, angel food cake, chiffon cake, and more. Students also will prepare and use frostings and icings including Italian buttercream, cream cheese frosting, royal icing, and fudge icing.

Objectives:

- Prepare a variety of cakes.
- Demonstrate different methods for making cakes.
- Identify and produce different types of icing.
- Demonstrate various icing and decorating techniques.
- Determine which types of icing are appropriate for different types of cake.

Line Cooking **2 Credits/60 Clock-Hours**

The Line Cooking course teaches food preparation and service for short order. This course gives students the opportunity to work on a short-order line and a restaurant-style hot line, in preparation for real life restaurant applications. This course provides a practical application of the food danger zone and focuses on heating, cooling, and proper holding of food as well as plating design. Students will also get an introduction to breakfast cookery. Students learn what a par stock is and help in the day-to-day preparation. Students use First in First Out (FIFO) techniques, and the sales of popular items in planning a food preparation schedule. Students learn important aspects of taking customer orders, service, and presentation of food in a hands-on line cooking experience.

Objectives:

- Plan proper holding temperatures for food without damaging quality.
- Plan for the day using FIFO techniques.
- Construct a par inventory level for the cafe.

- Demonstrate proper daily use, and cleaning of grill and fryer equipment.
- Produce breakfast items efficiently and without mistakes.
- Produce lunch items efficiently and without mistakes.
- Interact effectively with customers.
- Serve food that is attractively arranged on the plate or platter with proper balance of shape, color, and texture.
- Demonstrate proper cooking, holding, cooling, storing, and re-heating of food.

Job Seeking Skills **1 Credit/30 Clock-Hours**

Job Seeking Skills explores how to prepare and successfully apply to potential career opportunities. During this course, you will be presented with essential job-seeking skills needed to find gainful employment.

Objectives:

- Create a professional resume, cover letter and reference sheet.
- Utilize online tools successfully to create an e-portfolio.
- Expand and develop networking skills.
- Utilize online resources effectively to find job openings.
- Demonstrate the ability to fill out job applications in a professional manner.
- Perform successfully in a job interview.
- Demonstrate appropriate follow-up procedures.

Dixie

Culinary II **4 Credits/120 Clock-Hours**

The Culinary II course includes braising, sautéing, roasting, blanching, poaching, grilling, broiling, steaming, and frying. Grains, vegetable, potatoes and pasta preparations and cooking will also be learned in this class. Students will begin to use their skills to produce daily specials and grab and go food for the cafe.

Objectives:

- Select and prepare equipment for grilling, broiling, roasting, and baking.
- Explain what is meant by a “zone” on a grill or broiler and how it can be used to adapt to different foods or different production needs.
- Clean, preheat, and lubricate a grill or broiler.
- Grill or broil meats, poultry, and fish to the correct doneness to develop the best flavor and texture in the finished dish.
- Describe roasting, baking (as it relates to meat, poultry, and fish), smoke roasting, rotisserie cooking, and spit-roasting.
- Roast or bake meats, poultry, and fish to the correct doneness to develop the best flavor and texture in the finished dish.
- Describe the correct procedure for preparing a pan gravy and jus.
- Carve roasts into portions.
- Select and prepare appropriate meats, poultry, or fish for sautéing, pan frying, and deep frying.
- Sauté, pan fry, and deep fry a variety of foods using the basic methods outlined in the text.

World Cuisine **2 Credits/60 Clock-Hours**

This World Cuisine course teaches students about the vast array of ingredients and flavors found Throughout the world. Demonstrations on some regional and international dishes are given by the instructor. Using the same cooking principles that students have learned, they are able to cook with different herbs and spices from around the country to create some regional dishes.

Objectives:

- Demonstrate a variety of cooking methods using specific ingredients from a certain region.
- Examine different regions and gain a basic knowledge of the history of the cuisine.
- Construct dishes using regional and international flavors.
- Explain how geography and culture affect the regional cuisine.
- Build visually appealing and balanced plates from specific regions from around the country and the world.

Introduction to Restaurant Practical **1 Credit/30 Clock-Hours**

In the Introduction to Restaurant Practical course, students will begin learning the essential operations of a restaurant kitchen. They will learn basic cooking techniques, kitchen organization, and the importance of teamwork in a fast-paced culinary setting. Through focused hands-on practical exercises and guided activities, students will begin to develop the skills that are foundational to success in the culinary arts industry. This course serves as preparation for the Restaurant Practical course that will follow.

Objectives:

- Demonstrate basic food preparation techniques for simple dishes.
- Understand the flow of a restaurant kitchen and the roles within it.
- Apply essential kitchen safety and sanitation practices.
- Collaborate with peers to execute kitchen tasks effectively.
- Gain a preliminary understanding of menu planning and execution.

Banquets and Catering **4 Credits/120 Clock-Hours**

In the Banquets and Catering course, students will learn the specifics of cooking for small and large functions. Using a combination of both lecture and hands-on practical training, students will be taught front of house and back of house operations as it pertains to catering and full-service restaurants. There will be a strong emphasis on table service and overall guest service. Students will learn techniques for different types of serving and food.

Objectives:

- Describe the roles played by both staff and food in a banquet setting.
- Select and prepare ingredients, preparations, and garnishes for hors d'oeuvre, appetizers, and cold savory mousses and event cuisine.
- Describe the qualities of foods to be served as appetizers.
- Present banquets with professionalism.
- Name the basic guidelines for preparing and executing a banquet.
- Work properly with various food ingredients and cuisines.
- Explain the importance of making a good first impression.

Job Seeking Skills **1 Credit/30 Clock-Hours**

Job Seeking Skills explores how to prepare and successfully apply to potential career opportunities. During this course, you will be presented with essential job-seeking skills needed to find gainful employment.

Objectives:

- Create a professional resume, cover letter and reference sheet.
- Utilize online tools successfully to create an e-portfolio.
- Expand and develop networking skills.
- Utilize online resources effectively to find job openings.
- Demonstrate the ability to fill out job applications in a professional manner.
- Perform successfully in a job interview.
- Demonstrate appropriate follow-up procedures.

Mountainland

Advanced Culinary Techniques **2 Credits/60 Clock-Hours**

The Advanced Culinary Techniques course builds upon the foundational techniques and principles covered in Culinary Techniques I and provides an in-depth exploration of advanced culinary concepts, techniques, and creative applications. Students will delve into the world of gastronomy, refining their culinary abilities and expanding their repertoire to achieve a higher level of excellence in the culinary arts.

Objectives:

- Contrast and evaluate complex culinary techniques to develop an advanced understanding of the principles behind them and determine the most appropriate technique for different ingredients and recipes.
- Create innovative, well-balanced menus that showcase their culinary expertise. Students will explore culinary trends, global cuisines, and fusion cooking, while incorporating sustainable practices and utilizing seasonal, local ingredients.
- Identify skills related to culinary business management, including menu costing and pricing, inventory management, and effective communication and leadership within a culinary team.
- Demonstrate proficient knife skills and precision in culinary preparations.
- Design and execute complex recipes that showcase mastery of culinary techniques.
- Critique and provide constructive feedback on the culinary creations of others based on advanced culinary techniques.
- Compare and contrast different culinary techniques and their effects on texture, flavor, and visual appeal.
- Engage with industry professionals through guest lectures, culinary competitions, and field trips to renowned culinary establishments. They will develop professional networks and gain insights into current industry practices and trends.

World Cuisine **2 Credits/60 Clock-Hours**

This World Cuisine course teaches students about the vast array of ingredients and flavors found Throughout the world. Demonstrations on some regional and international dishes are given by the instructor. Using the same cooking principles that students have learned, they are able to cook with different herbs and spices from around the country to create some regional dishes.

Objectives:

- Demonstrate a variety of cooking methods using specific ingredients from a certain region.
- Examine different regions and gain a basic knowledge of the history of the cuisine.
- Construct dishes using regional and international flavors.
- Explain how geography and culture affects the regional cuisine.
- Build visually appealing and balanced plates from specific regions from around the country and the world.

Baking II **2 Credits/60 Clock-Hours**

The Baking II course expands the students' knowledge and skills and prepares them to work in a retail or industrial bakery. Students practice creating a variety of baked and dessert goods. Advanced bakery techniques are shared and practiced.

Objectives:

- Construct pies with appropriate crust and filling while being able to differentiate the filling methods.
- Produce puff and blitz pastry dough using proper roll-in and fold-in techniques.
- Cook sugar syrup to the seven different stages, avoiding crystallization.
- Produce pastry cream and baked custard.
- Examine the differences between a baked pudding and starch-thickened pudding.

Job Seeking Skills **1 Credit/30 Clock-Hours**

Job Seeking Skills explores how to prepare and successfully apply to potential career opportunities. During this course, you will be presented with essential job-seeking skills needed to find gainful employment.

Objectives:

- Create a professional resume, cover letter and reference sheet.
- Utilize online tools successfully to create an e-portfolio.
- Expand and develop networking skills.
- Utilize online resources effectively to find job openings.
- Demonstrate the ability to fill out job applications in a professional manner.
- Perform successfully in a job interview.
- Demonstrate appropriate follow-up procedures.

Front of House Restaurant Management **1 Credit/30 Clock-Hours**

The Front of House Restaurant Management course is designed to provide students with a comprehensive understanding of the key principles and practices involved in managing the front of a restaurant. This course will cover various aspects, including customer service, staff management, operations, and the overall guest experience. Students will develop the necessary skills and knowledge to excel in a front of house management role and contribute to the success of a restaurant.

Objectives:

- Explain the responsibilities and duties of front of house staff and the importance of their role in delivering exceptional guest experiences.
- Describe how to recruit, train, and manage front of house staff, including servers, hosts, and bartenders.

- Identify effective customer service techniques including communication skills, conflict resolution, and problem-solving, to provide outstanding service and ensure customer satisfaction.
- Devise and execute strategies for resolving customer complaints and handling challenging situations in a professional manner.
- Describe strategies for handling reservations, managing table assignments, and optimizing seating arrangements to maximize restaurant capacity and enhance the guest experience.
- Explain the importance of teamwork and motivation in creating a positive work environment.
- Demonstrate effective communication skills in managing and coordinating front of house staff and activities.
- Critique and provide constructive feedback on front-of-house operations, including service standards, staff performance, and overall guest experience.
- Develop strategies to handle guest complaints and feedback professionally and efficiently, aiming to resolve issues and ensure guest satisfaction.
- Practice basic financial concepts relevant to front of house operations, including budgeting, cost control, pricing strategies, and revenue management.

Nutrition **1 Credit/30 Clock-Hours**

In the Nutrition course, students will explore the intersection of culinary arts and nutrition science. Through a blend of theory, practical cooking demonstrations, and interactive discussions, students will learn about the impact of food on our bodies, delve into the principles of balanced nutrition, and explore techniques for incorporating wholesome ingredients into culinary creations.

Objectives:

- Discuss the fundamentals of nutrition and the key nutrients bodies require, including carbohydrates, proteins, fats, vitamins, minerals, and dietary fiber.
- Identify the relationship between nutrition and various health conditions, including heart disease, diabetes, obesity, and food allergies and discover how dietary choices can help prevent or manage these conditions.
- Develop essential skills in preparing healthy meals, including healthy techniques for steaming, grilling, roasting, sautéing, and baking.
- Utilize a variety of whole foods, emphasizing the importance of color, texture, and flavor while ensuring a balance of macronutrients and adequate intake of essential vitamins and minerals.
- Evaluate and interpret food labels and nutrition information to make informed choices about food products.
- Evaluate and discuss the socio-cultural, economic, and environmental factors that influence food choices and nutrition.

Culinary Arts Externship **2 Credits/90 Clock-Hours**

Externship students will have a work-based learning experience in a foodservice environment under the supervision of a pre-approved chef. Food service will involve at least 51 percent cooking from scratch h.

Objectives:

- Identify opportunities to learn new skills.
- Demonstrate working knowledge of learned skills.
- Execute proper sanitation and professionalism.
- Perform the assigned functions of the establishment.
- Explain the learning gained from this experience.

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Ogden-Weber

World Cuisine — 2 Credits/60 Clock-Hours

This World Cuisine course teaches students about the vast array of ingredients and flavors found Throughout the world. Demonstrations on some regional and international dishes are given by the instructor. Using the same cooking principles that students have learned, they are able to cook with different herbs and spices from around the country to create some regional dishes.

Objectives:

- Demonstrate a variety of cooking methods using specific ingredients from a certain region.
- Examine different regions and gain a basic knowledge of the history of the cuisine.
- Construct dishes using regional and international flavors.
- Explain how geography and culture affect the regional cuisine.
- Build visually appealing and balanced plates from specific regions from around the country and the world.

Hors d'oeuvres — 2 Credits/60 Clock-Hours

This course explores advanced cooking techniques and methods for preparing various types of Hors d'oeuvres from a variety of different types of cuisine.

Objectives:

- Prepare a variety of cold hors d'oeuvre, including canapés.
- Prepare a variety of hot hors d'oeuvre, including canapés.
- Serve a variety of cold hors d'oeuvre, including canapés.
- Serve a variety of hot hors d'oeuvre, including canapés.
- Choose hors d'oeuvre, including canapés, that are appropriate for the meal or event.

Brunch — 2 Credits/60 Clock-Hours

This course explores advanced cooking techniques and methods for preparing brunch foods to include quiches, flaky biscuits, eggs benedict, chilaquiles, breakfast cereals, breakfast meats, and breakfast pastries.

Objectives:

- Select, prepare, and serve a variety of foods for brunch.
- Describe types of foods to serve for brunch.
- Explain the basic principles of buffet presentation.
- Use a variety of techniques for appealing buffets.

Garde Manger II — 3 Credits/90 Clock-Hours

This course introduces concepts about forcemeat assembly, pate terrines, sausages, and proper methods for brining, curing and smoking meats and fish. Additionally, this course explores appropriate ways to prepare foods using a variety of methods and techniques to include pickling, curing, brining, smoking, spice blends, salsa, cheeses, and condiments.

Objectives:

- Identify categories of nutrients and explain their importance in a healthy diet.
- Identify the characteristics of a nutritious diet for healthy adults.

- Describe diet-planning tools available to consumers and chefs.
- Prepare a variety of forcemeats.
- Assemble and cook a variety of pâtés, terrines, and sausages.
- Perform the proper methods for brining, curing and smoking meats and fish.
- Identify several cured pork products.
- Describe the basic principles of plate presentation.
- Use a variety of techniques to add visual appeal to plated foods.
- Explain the concept of a small plate menu and how to compose small plates.

Pies and Pastries **2 Credits/60 Clock-Hours**

This course explores how to use rich yeast doughs and laminated doughs for sweet breads and pastries and preparing flaky and mealy doughs. This course covers techniques for rolling and shaping dough for double crust pies, and how to roll dough for lattice crust and tartlets shells. This course covers topics on how to prepare a variety of pies, tarts, Danish pastries, puff pastries, eclairs, and pie and pastry fillings.

Objectives:

- Prepare a variety of pie crusts and fillings.
- Prepare a variety of classic pastries.
- Prepare a variety of meringues.
- Prepare a variety of cookies.
- Prepare a variety of dessert and pastry items, incorporating components from other chapters.

Cakes and Frostings **2 Credits/60 Clock-Hours**

This course explores how each ingredient is used to make cakes and their functions. This course covers a variety of cakes using creamed fat and whipped egg with high fat mixing methods, and egg foam mixing methods. This course explores a variety of frostings, butter cakes, high ration cakes, and sponge cakes.

Objectives:

- Prepare a variety of cakes.
- Prepare a variety of frostings.
- Assemble cakes using basic finishing and decorating techniques.

Custards and Frozen Desserts **2 Credits/60 Clock-Hours**

This course explores stirred custard, baked custard, fruit sauce, cream sauce, caramel, soufflés, bread puddings, cheesecakes, curds and pastry creams and mousse. This course covers a variety of custards, creams, ice creams, sorbets, frozen dessert items, and dessert sauces.

Objectives:

- Prepare a variety of custards and creams.
- Prepare a variety of ice creams, sorbets and frozen dessert items.
- Prepare a variety of dessert sauces.
- Use these products in preparing and serving other pastry and dessert items.
- Describe the basic principles of plate presentation.
- Use a variety of techniques to add visual appeal to plated foods.
- Explain the concept of a small plate menu and how to compose small plates.

Advanced Yeast Breads **2 Credits/60 Clock-Hours**

This course explores traditional sourdough and rye breads. Students will learn about flour types and grains, and how to select and use yeast properly. This course covers topics on how to prepare a variety of breads from lean and rich yeast doughs and will utilize proper shaping techniques.

Objectives:

- Select yeast properly.
- Use yeast properly.
- Perform the 10 steps involved in yeast bread production.
- Mix yeast dough using the straight dough method.
- Mix yeast dough using the sponge method.

Job Seeking Skills **1 Credit/30 Clock-Hours**

Job Seeking Skills explores how to prepare and successfully apply to potential career opportunities. During this course, you will be presented with essential job-seeking skills needed to find gainful employment.

Objectives:

- Create a professional resume, cover letter and reference sheet.
- Utilize online tools successfully to create an e-portfolio.
- Expand and develop networking skills.
- Utilize online resources effectively to find job openings.
- Demonstrate the ability to fill out job applications in a professional manner.
- Perform successfully in a job interview.
- Demonstrate appropriate follow-up procedures.

Food Purchasing and Budgets **2 Credits/60 Clock-Hours**

This course explores the foundations of food budgeting and purchasing for catering, kitchen and restaurant management. This course covers topics on how to apply skills needed to maintain a budget as well as prepare and deploy a menu.

Objectives:

- Maintain inventory of food sold through the Campus Grille on a weekly basis.
- Compile a list of food to be purchased on a weekly basis for the Campus Grille.
- Create a summary report on a weekly basis of food sold and an inventory of food to be ordered.
- Summary report to a head chef.

Culinary Arts Special Projects **1 Credit/45 Clock-Hours**

This course covers the use of skills and techniques learned to complete a project under the approval and supervision of a culinary arts instructor.

Objectives:

- Use appropriate cooking techniques.
- Create a unique meal.
- Perform in the kitchen environment.

Culinary Arts Externship **1 Credit/45 Clock-Hours**

This course provides experience working in a hands-on culinary setting. This externship will be coordinated and approved by Culinary Arts program faculty.

Objectives:

- Use appropriate cooking techniques.
- Create a unique meal.
- Perform in the kitchen environment**.**

Snow

World Cuisine **2 Credits/60 Clock-Hours**

This World Cuisine course teaches students about the vast array of ingredients and flavors found Throughout the world. Demonstrations on some regional and international dishes are given by the instructor. Using the same cooking principles that students have learned, they are able to cook with different herbs and spices from around the country to create some regional dishes.

Objectives:

- Demonstrate a variety of cooking methods using specific ingredients from a certain region.
- Examine different regions and gain a basic knowledge of the history of the cuisine.
- Construct dishes using regional and international flavors.
- Explain how geography and culture affect the regional cuisine.
- Build visually appealing and balanced plates from specific regions from around the country and the world.

Vegetables, Grains, and Starches **2 Credits/60 Clock-Hours**

In this course, students will learn about different types of vegetables, grains, and starches as well as how to properly store, prepare, and serve them. Students will also gain a greater understanding of vegan/vegetarian diets and how they pertain to the industry.

Objectives:

- Identify and prepare a variety of vegetables.
- Identify and prepare a variety of potatoes.
- Demonstrate preparation and cooking of legumes, grains, pasta, and other starches.
- Demonstrate preparation and cooking for vegetarian diets.
- Prepare a variety of legumes, grains, pasta, and other starches.

Baking II **2 Credits/60 Clock-Hours**

The Baking II course expands the students' knowledge and skills and prepares them to work in a retail or industrial bakery. Students practice creating a variety of baked and dessert goods. Advanced bakery techniques are shared and practiced.

Objectives:

- Construct pies with appropriate crust and filling while being able to differentiate the filling methods.
- Produce puff and blitz pastry dough using proper roll-in and fold-in techniques.
- Cook sugar syrup to the seven different stages, avoiding crystallization.

- Produce pastry cream and baked custard.
- Examine the differences between a baked pudding and starch-thickened pudding.

Line Cooking **2 Credits/60 Clock-Hours**

The Line Cooking course teaches food preparation and service for short order. This course gives students the opportunity to work on a short-order line and a restaurant-style hot line, in preparation for real life restaurant applications. This course provides a practical application of the food danger zone and focuses on heating, cooling, and proper holding of food as well as plating design. Students will also get an introduction to breakfast cookery. Students learn what a par stock is and help in the day-to-day preparation. Students use First in First Out (FIFO) techniques, and the sales of popular items in planning a food preparation schedule. Students learn important aspects of taking customer orders, service, and presentation of food in a hands-on line cooking experience.

Objectives:

- Plan proper holding temperatures for food without damaging quality.
- Plan for the day using FIFO techniques.
- Construct a par inventory level for the cafe.
- Demonstrate proper daily use, and cleaning of grill and fryer equipment.
- Produce breakfast items efficiently and without mistakes.
- Produce lunch items efficiently and without mistakes.
- Interact effectively with customers.
- Serve food that is attractively arranged on the plate or platter with proper balance of shape, color, and texture.
- Demonstrate proper cooking, holding, cooling, storing, and re-heating of food.

Job Seeking Skills **1 Credit/30 Clock-Hours**

Job Seeking Skills explores how to prepare and successfully apply to potential career opportunities. During this course, you will be presented with essential job-seeking skills needed to find gainful employment.

Objectives:

- Create a professional resume, cover letter and reference sheet.
- Utilize online tools successfully to create an e-portfolio.
- Expand and develop networking skills.
- Utilize online resources effectively to find job openings.
- Demonstrate the ability to fill out job applications in a professional manner.
- Perform successfully in a job interview.
- Demonstrate appropriate follow-up procedures.

ServSafe Food Managers Course **1 Credit/30 Clock-Hours**

The ServSafe Food Managers Certification course expands on the students' basic food safety knowledge and standards. Students will go into more details on safe food handling, time and temperature abuse, food borne illnesses, various sanitizers and their application, allergens, cross-contact, proper kitchen flow, pest management, facilities, and equipment management. The purpose of this training is to prepare students for supervisory positions that require a Food Managers Certification.

Objectives:

- Identify the symptoms and associated foods that can cause the Big Six food borne illnesses.

- Demonstrate the proper procedures for identifying intentional food contamination that can cause illness or harm to the public.
- Plan and compose an Active Managerial System for one of the steps in the Flow of Food.
- Demonstrate the usage of SDS, OSHA, and other safety materials.
- Pass National ServSafe Certification standards and exam.

Food Truck Management **1 Credit/30 Clock-Hours**

This course provides a comprehensive overview of food truck management, equipping students with the knowledge and skills necessary to start and successfully operate a food truck business. Topics include business planning, licensing and regulations, menu development, marketing, and day-to-day operations.

Objectives:

- Develop a viable business plan for a food truck.
- Navigate the legal and regulatory requirements for operating a food truck.
- Design a menu that balances customer appeal and operational feasibility.
- Outline effective marketing strategies to attract and retain customers.

Southwest

World Cuisine **2 Credits/60 Clock-Hours**

This World Cuisine course teaches students about the vast array of ingredients and flavors found Throughout the world. Demonstrations on some regional and international dishes are given by the instructor. Using the same cooking principles that students have learned, they are able to cook with different herbs and spices from around the country to create some regional dishes.

Objectives:

- Demonstrate a variety of cooking methods using specific ingredients from a certain region.
- Examine different regions and gain a basic knowledge of the history of the cuisine.
- Construct dishes using regional and international flavors.
- Explain how geography and culture affect the regional cuisine.
- Build visually appealing and balanced plates from specific regions from around the country and the world.

Flavor Essentials **1 Credit/30 Clock-Hours**

The Flavor Essentials course teaches students the importance of working with flavors and seasonings. Students learn about sustainability and when different fruits and vegetables are in season to best utilize their flavor. Students work on plating, advanced flavor, and seasoning.

Objectives:

- Combine flavor and seasoning profiles.
- Demonstrate the ability of working with seasonal fruits and vegetables.
- Determine proper use of fresh herbs and spices.
- Demonstrate proper plating.

Pastas and Grains **2 Credits/60 Clock-Hours**

The Pastas and Grains course teaches students about different types of starches including pasta and grains. Students learn the proper techniques in creating pasta dough and shaping for the desired finished

product. Several methods of potato preparation are demonstrated. Rice/grain cooking methods are explained and demonstrated to the students.

Objectives:

- Prepare pasta dough and identify different shapes and uses of pasta.
- Identify grains and cook them using a variety of methods.
- Identify different types of rice and demonstrate a variety of methods to cook rice.
- Describe the role of starches and their place on a balanced plate.
- Identify different beans and legumes.

Baking II **2 Credits/60 Clock-Hours**

The Baking II course expands the students' knowledge and skills and prepares them to work in a retail or industrial bakery. Students practice creating a variety of baked and dessert goods. Advanced bakery techniques are shared and practiced.

Objectives:

- Construct pies with appropriate crust and filling while being able to differentiate the filling methods.
- Produce puff and blitz pastry dough using proper roll-in and fold-in techniques.
- Cook sugar syrup to the seven different stages, avoiding crystallization.
- Produce pastry cream and baked custard.
- Examine the differences between a baked pudding and starch-thickened pudding.

Custom Baking Service **1 Credit/30 Clock-Hours**

The Custom baking course teaches students to use their baking skills in fulfill a custom order. Students learn best practices for time and food management along with service techniques. They also learn accurate item pricing for baked goods and effective customer communication and interactions.

Objectives:

- Discuss food costing.
- Plan and time baked goods for an event or customer.
- Practice taking customer orders and confirming and complete service.

Job Seeking Skills **1 Credit/30 Clock-Hours**

Job Seeking Skills explores how to prepare and successfully apply to potential career opportunities. During this course, you will be presented with essential job-seeking skills needed to find gainful employment.

Objectives:

- Create a professional resume, cover letter and reference sheet.
- Utilize online tools successfully to create an e-portfolio.
- Expand and develop networking skills.
- Utilize online resources effectively to find job openings.
- Demonstrate the ability to fill out job applications in a professional manner.
- Perform successfully in a job interview.
- Demonstrate appropriate follow-up procedures.

ServSafe Food Managers Course **1 Credit/30 Clock-Hours**

The ServSafe Food Managers Certification course expands on the students' basic food safety knowledge and standards. Students will go into more details on safe food handling, time and temperature abuse, food borne illnesses, various sanitizers and their application, allergens, cross-contact, proper kitchen flow, pest management, facilities, and equipment management. The purpose of this training is to prepare students for supervisory positions that require a Food Managers Certification.

Objectives:

- Identify the symptoms and associated foods that can cause the Big Six food borne illnesses.
- Demonstrate the proper procedures for identifying intentional food contamination that can cause illness or harm to the public.
- Plan and compose an Active Managerial System for one of the steps in the Flow of Food.
- Demonstrate the usage of SDS, OSHA, and other safety materials.
- Pass National ServSafe Certification standards and exam.

Culinary Arts Externship **2 Credits/90 Clock-Hours**

Externship students will have a work-based learning experience in a foodservice environment under the supervision of a pre-approved chef. Food service will involve at least 51 percent cooking from scratch h.

Objectives:

- Identify opportunities to learn new skills.
- Demonstrate working knowledge of learned skills.
- Execute proper sanitation and professionalism.
- Perform the assigned functions of the establishment.
- Explain the learning gained from this experience.

Uintah Basin

World Cuisine **2 Credits/60 Clock-Hours**

This World Cuisine course teaches students about the vast array of ingredients and flavors found Throughout the world. Demonstrations on some regional and international dishes are given by the instructor. Using the same cooking principles that students have learned, they are able to cook with different herbs and spices from around the country to create some regional dishes.

Objectives:

- Demonstrate a variety of cooking methods using specific ingredients from a certain region.
- Examine different regions and gain a basic knowledge of the history of the cuisine.
- Construct dishes using regional and international flavors.
- Explain how geography and culture affect the regional cuisine.
- Build visually appealing and balanced plates from specific regions from around the country and the world.

Vegetables, Grains, and Starches **2 Credits/60 Clock-Hours**

In this course, students will learn about different types of vegetables, grains, and starches as well as how to properly store, prepare, and serve them. Students will also gain a greater understanding of vegan/vegetarian diets and how they pertain to the industry.

Objectives:

- Identify and prepare a variety of vegetables.
- Identify and prepare a variety of potatoes.
- Demonstrate preparation and cooking of legumes, grains, pasta, and other starches.
- Demonstrate preparation and cooking for vegetarian diets.
- Prepare a variety of legumes, grains, pasta, and other starches.

Advanced Baking – Pastries **2 Credits/60 Clock-Hours**

The Advanced Baking - Pastries course continues to explore baking skills with an emphasis on pastries and will focus on creating desserts that require more complex skills to develop than basic baking. In this course students will create and plate each dessert they make.

Objectives:

- Prepare a variety of pastries and deserts using different methods.
- Successfully prepare puff pastry or phyllo dough.
- Successfully prepare Pate a choux.
- Prepare different types of tarts.
- Prepare baked custards and puddings.
- Produce desserts using different types of custards, creams, and mousses.

Line Cooking **2 Credits/60 Clock-Hours**

The Line Cooking course teaches food preparation and service for short order. This course gives students the opportunity to work on a short-order line and a restaurant-style hot line, in preparation for real life restaurant applications. This course provides a practical application of the food danger zone and focuses on heating, cooling, and proper holding of food as well as plating design. Students will also get an introduction to breakfast cookery. Students learn what a par stock is and help in the day-to-day preparation. Students use First in First Out (FIFO) techniques, and the sales of popular items in planning a food preparation schedule. Students learn important aspects of taking customer orders, service, and presentation of food in a hands-on line cooking experience.

Objectives:

- Plan proper holding temperatures for food without damaging quality.
- Plan for the day using FIFO techniques.
- Construct a par inventory level for the cafe.
- Demonstrate proper daily use, and cleaning of grill and fryer equipment.
- Produce breakfast items efficiently and without mistakes.
- Produce lunch items efficiently and without mistakes.
- Interact effectively with customers.
- Serve food that is attractively arranged on the plate or platter with proper balance of shape, color, and texture.
- Demonstrate proper cooking, holding, cooling, storing, and re-heating of food.

Banquet Service/Catering **1 Credit/30 Clock-Hours**

The Banquet Service/Catering course teaches students best practices for time and food management along with service techniques. Students learn the basics of banquet set up and the profitability this can add to your restaurant. In this course, students will have the opportunity to work on real catering events and help plan and create food for each event.

Objectives:

- Set up a variety of catering events.
- Help plan and create menu options for catering events.
- Explain all the different roles that are required to have a successful catering/ banquet company.
- Demonstrate good time management and supervision of people and food.
- Explain how to order enough food for a catering or banquet event.

Job Seeking Skills **1 Credit/30 Clock-Hours**

Job Seeking Skills explores how to prepare and successfully apply to potential career opportunities. During this course, you will be presented with essential job-seeking skills needed to find gainful employment.

Objectives:

- Create a professional resume, cover letter and reference sheet.
- Utilize online tools successfully to create an e-portfolio.
- Expand and develop networking skills.
- Utilize online resources effectively to find job openings.
- Demonstrate the ability to fill out job applications in a professional manner.
- Perform successfully in a job interview.
- Demonstrate appropriate follow-up procedures.

Menu Design and Inventory Controls **2 Credits/60 Clock-Hours**

Menu Design and Inventory Controls gives the student the opportunity to create their own hospitality concept. This would include location, size of operation (staffing and building vs mobile), style of cuisine, and demographic they would serve. Students will understand how to create a menu and inventory list for their new concept and cost of each menu item. After the inventory list is created students will gain an understanding of how that is directly tied to profit and loss statement.

Objectives:

- Plan and create a hospitality concept.
- Create a detailed menu.
- Conduct inventory.
- Demonstrate how cost to menu items.
- Create a detailed inventory list for their new concept.
- Calculate labor for new concept.

UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Diesel Technology
FY2026 / 25 Credits (750 Clock-Hours)

Diesel Technology

Institutions: Bridgerland, Davis, Dixie, Mountainland, Salt Lake, Snow, Tooele, Uintah Basin, USU-Eastern

Technical Certificate (Catalog Year: 2026, 25 Credits/750 Clock-Hours Required, CIP: 47.0605)

Foundational Courses (25 Credits/750 Clock-Hours)		**Credits**	**Clock-Hours**
TEDT 1010	Introduction to Diesel Technology	2	60
TEDT 1100	Electrical I	4	120
TEDT 1200	Steering and Suspension	4	120
TEDT 1300	Brakes	4	120
TEDT 1400	Drivetrain	4	120
TEDT 1600	Engines I	4	120
TEDT 1610	Engines II	3	90
Supplemental Courses			
***Bridgerland* (10 Credits/300 Clock-Hours)**			
TEDT 1110	Electrical II	4	120
TEDT 1500	Preventative Maintenance I	1	30
TEDT 1700	Hydraulics	2	60
TEDT 1800	Heating, Ventilation, and Air Conditioning (HVAC)	3	90
***Davis* (10 Credits/300 Clock-Hours)**			
TEDT 1110	Electrical II	4	120
TEDT 1500	Preventative Maintenance I	1	30
TEDT 1700	Hydraulics	2	60
TEDT 1800	Heating, Ventilation, and Air Conditioning (HVAC)	3	90
***Dixie* (10 Credits/300 Clock-Hours)**			
TEDT 1110	Electrical II	4	120
TEDT 1500	Preventative Maintenance I	1	30
TEDT 1700	Hydraulics	2	60
TEDT 1800	Heating, Ventilation, and Air Conditioning (HVAC)	3	90
***Mountainland* (10 Credits/300180 Clock-Hours)**			
TEDT 1110	Electrical II	4	120
TEDT 1500	Preventative Maintenance I	1	30
TEDT 1510	Preventative Maintenance II	3	90
TEDT 1810	Heating, Ventilation, and Air Conditioning (HVAC)	2	60
***Salt Lake* (10 Credits/300 Clock-Hours)**			
TEDT 1110	Electrical II	4	120
TEDT 1500	Preventative Maintenance I	1	30
TEDT 1700	Hydraulics	2	60
TEDT 1800	Heating, Ventilation, and Air Conditioning (HVAC)	3	90
***Snow* (10 Credits/300 Clock-Hours)**			
TEDT 1000	Diesel Safety and Basics	1	30
TEDT 1110	Electrical II	4	120
TEDT 1700	Hydraulics	2	60
TEDT 1800	Heating, Ventilation, and Air Conditioning (HVAC)	3	90
***Tooele* (10 Credits/300 Clock-Hours)**			
TEDT 1110	Electrical II	4	120
TEDT 1500	Preventative Maintenance I	1	30
TEDT 1700	Hydraulics	2	60
TEDT 1800	Heating, Ventilation, and Air Conditioning (HVAC)	3	90
***Uintah Basin* (6 Credits/180 Clock-Hours)**			
TEDT 1110	Electrical II	4	120
TEDT 1500	Preventative Maintenance I	1	30
TEDT 1700	Hydraulics	2	60
TEDT 1800	Heating, Ventilation, and Air Conditioning (HVAC)	3	90
***USU - Eastern* (10 Credits/300 Clock-Hours)**			
TEDT 1110	Electrical II	4	120
TEDT 1500	Preventative Maintenance I	1	30
TEDT 1700	Hydraulics	2	60
TEDT 1800	Heating, Ventilation, and Air Conditioning (HVAC)	3	90

November 10, 2023
Adjusted October 31, 2024

UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Diesel Technology
FY2026 / 25 Credits (750 Clock-Hours)

PROGRAM DESCRIPTION

The Diesel Technology program prepares students with the diversified employment skills and knowledge as diesels technicians, including hands-on instruction in diesel engines; electrical/electronic systems; steering and suspension; brakes; drivetrain; heating, ventilation, and air conditioning; hydraulics; preventative maintenance; safety; professionalism; and workplace relations.

Objectives:

- Demonstrate safe working habits and practices.
- Demonstrate knowledge related to the service, maintenance, operation, and function of the core systems related to diesel powered equipment.
- Build and maintain good working relationships.

FOUNDATIONAL COURSE DESCRIPTIONS

Introduction to Diesel Technology — 2 Credits/60 Clock-Hours

Introduction to Diesel Technology course provides students an introduction to Heavy-Duty commercial vehicles, including available careers and the skills and certifications required. Students will receive instruction in safety, personal protection equipment, the use of basic tools and shop equipment.

Objectives:

- Demonstrate a safety-oriented mindset and always ensure a safe working environment.
- Demonstrate the proper use of the tools and equipment needed to work in the diesel industry.
- Demonstrate the ability to measure, identify and repair fasteners and hoses related to the diesel industry.

Electrical I — 4 Credits/120 Clock-Hours

Electrical I provides theory and hands-on instruction on the principals of electricity, basic components, sensors, circuits, wiring schematics, and multi-meters.

Objectives:

- Identify electrical systems associated with diesel vehicles.
- Explain basic electrical circuits and how they work.
- Discuss battery, starting circuits, and charging systems and their proper function.

Steering and Suspension — 4 Credits/120 Clock-Hours

The Steering and Suspension course provides theory and hands-on instruction on the maintenance and repair of front axles, alignment, truck frames, steering and suspension systems, and coupling devices.

Objectives:

- Safely work on and around steering and suspension systems.
- Identify the major steering and suspension components related to Class 6,7, and 8 trucks.
- Diagnose, adjust, and repair steering and suspension systems related to Class 6, 7, and 8 trucks.

November 10, 2023
Adjusted October 31, 2024

Brakes **4 Credits/120 Clock-Hours**

Brakes provides theory and hands-on instruction on heavy duty braking systems. Students will learn maintenance and repair of wheels and tires, hubs and wheel bearings, air brake systems, drum and rotor brakes, Anti-lock braking system (ABS), and hydraulic braking systems.

Objectives:

- Maintain vehicle safety through safe brake maintenance and repairs.
- Identify and repair the major components related to truck air foundation brake systems.
- Identify and repair truck air disk brake systems.

Drivetrain **4 Credits/120 Clock-Hours**

In this Drivetrain course, students receive theory and hands-on instruction on maintenance and repair of the heavy-duty drivetrain systems. Topics will include clutches, transmissions, drive lines, and differentials.

Objectives:

- Identify the major components of the drivetrain system.
- Explain the function of the drivetrain systems.
- Repair, replace, and diagnose drivetrain system components related to the transportation industry.

Engines I **4 Credits/120 Clock-Hours**

Engines I provides theory and hands-on instruction in basic operation, parts, and overhaul procedures of diesel engines. Students learn the removal, service, and repair of engine blocks, crankshafts, pistons, rings, connecting rods, camshafts, valve trains, injection pumps, and accessories.

Objectives:

- Identify the major components of the internal combustion diesel engine.
- Explain the function of the major components of the internal combustion diesel engine.
- Disassemble, inspect, and reassemble the major components of a diesel engine.

Engines II **3 Credits/90 Clock-Hours**

Engines II provides the student with more advanced theory and hands-on instruction in diagnostics and operational systems of the internal combustion engine, including emissions, fuel, and after-treatment systems.

Objectives:

- Identify the type of diesel fuel system and explain its operation.
- Identify the components of modern diesel engines emission systems.
- Explain how modern diesel emission systems components function to meet current EPA standards.
- Service, diagnose, and repair internal combustion engines, fuel, and emission aftertreatment systems.

SUPPLEMENTAL COURSE DESCRIPTIONS

Bridgerland, Davis, Dixie, Tooele, Uintah Basin, USU-E

Electrical II — 4 Credits/120 Clock-Hours

In the Electrical II course, students learn advanced electrical theory and diagnostic procedures.

Objectives:

- Diagnose electrical systems associated with diesel vehicles.
- Interpret electrical schematics and apply them to the diesel industry.
- Demonstrate basic use of computer guided electrical diagnostics as it pertains to engine chassis and braking systems.

Preventative Maintenance I — 1 Credit/30 Clock-Hours

The Preventative Maintenance course introduces students to the service and preventive maintenance practices found within the trucking industry. Instruction includes inspection and maintenance of truck and trailer systems, engine systems, electrical systems, frame, and steering components.

Objectives:

- Discuss preventative maintenance and why it is so important for safety and productivity of the diesel industry.
- Inspect all truck systems and determine vehicles meets safe working standards.
- Demonstrate the service and maintenance of commercial truck systems.

Hydraulics — 2 Credits/60 Clock-Hours

The Hydraulics course provides theory and hands-on instruction of fluid power as used in modern mobile equipment. Topics include the operation and repair of hydraulic/pneumatic components and systems. This course emphasizes testing, troubleshooting, design, and use of hydraulic schematics.

Objectives:

- Explain the dangers of working with hydraulics and how to safely eliminate them.
- Identify and explain the proper function of basic hydraulic systems.
- Diagnose and repair hydraulic systems.

Heating, Ventilation, and Air Conditioning (HVAC) — 3 Credits/90 Clock-Hours

Heating, Ventilation, and Air Conditioning (HVAC) provides students with theory and hands-on instruction regarding troubleshooting and repair of heavy-duty truck air conditioning systems. Topics include condensers; check valves; driers; compressors; evaporators; controls; heating and cooling systems and controls; and refrigerant handling.

Objectives:

- Discuss the function of the heating ventilation and air conditioning systems.
- Demonstrate proper use of an HVAC recovery machine.
- Diagnose, repair, and recharge vehicle HVAC systems in accordance with EPA laws and regulations.

Electrical II **4 Credits/120 Clock-Hours**

In the Electrical II course, students learn advanced electrical theory and diagnostic procedures.

Objectives:

- Diagnose electrical systems associated with diesel vehicles.
- Interpret electrical schematics and apply them to the diesel industry.
- Demonstrate basic use of computer guided electrical diagnostics as it pertains to engine chassis and braking systems.

Preventative Maintenance I **1 Credit/30 Clock-Hours**

The Preventative Maintenance course introduces students to the service and preventive maintenance practices found within the trucking industry. Instruction includes inspection and maintenance of truck and trailer systems, engine systems, electrical systems, frame, and steering components.

Objectives:

- Discuss preventative maintenance and why it is so important for safety and productivity of the diesel industry.
- Inspect all truck systems and determine vehicles meets safe working standards.
- Demonstrate the service and maintenance of commercial truck systems.

Preventative Maintenance II **3 Credits/90 Clock-Hours**

This course covers identification of additional components on the truck. It teaches the importance of doing inspections and preventative maintenance for heavy duty trucks, and of following recommended practices from manufacturers.

Objectives:

- Discuss each section of the tuck and help the students identify components and basic services.
- Discuss the importance and safety protocols of a full inspection on a truck.
- Perform pre-trip inspections on a truck, and the truck systems.
- Create a preventative maintenance schedule, including where you can find the information from manufacturers.

Heating, Ventilation, and Air Conditioning (HVAC) **2 Credits/60 Clock-Hours**

Heating, Ventilation, and Air Conditioning (HVAC) provides students with theory and hands-on instruction regarding troubleshooting and repair of heavy-duty truck air conditioning systems. Topics include condensers; check valves; driers; compressors; evaporators; controls; heating and cooling systems and controls; and refrigerant handling.

Objectives:

- Discuss the function of the heating ventilation and air conditioning systems.
- Demonstrate proper use of an HVAC recovery machine.
- Diagnose, repair, and recharge vehicle HVAC systems in accordance with EPA laws and regulations.

Utah System of Higher Education
Diesel Technology
FY2026 / 25 Credits (750 Clock-Hours)

Snow

Diesel Safety and Basics **1 Credit/30 Clock-Hours**

This course provides proper knowledge and practices in safety to help establish working habits that would reflect industry standards and result in a safe working environment. It also introduces students to tools, measuring equipment, and basic diesel service procedures.
Objectives:

- Demonstrate safety of general shop safety, hazardous waste, under-car safety, under-hood safety, hybrid vehicle safety.
- Identify locations and proper usage of fire extinguishers, eye wash stations, first aid stations, and exhaust handling equipment.
- Properly usage of hand tools and metric and standard measuring tools.
- Follow safe and proper procedures for preforming basic services on diesel vehicles.

Electrical II **4 Credits/120 Clock-Hours**

In the Electrical II course, students learn advanced electrical theory and diagnostic procedures.

Objectives:

- Diagnose electrical systems associated with diesel vehicles.
- Interpret electrical schematics and apply them to the diesel industry.
- Demonstrate basic use of computer guided electrical diagnostics as it pertains to engine chassis and braking systems.

Hydraulics **2 Credits/60 Clock-Hours**

The Hydraulics course provides theory and hands-on instruction of fluid power as used in modern mobile equipment. Topics include the operation and repair of hydraulic/pneumatic components and systems. This course emphasizes testing, troubleshooting, design, and use of hydraulic schematics.

Objectives:

- Explain the dangers of working with hydraulics and how to safely eliminate them.
- Identify and explain the proper function of basic hydraulic systems.
- Diagnose and repair hydraulic systems.

Heating, Ventilation, and Air Conditioning (HVAC) **3 Credits/90 Clock-Hours**

Heating, Ventilation, and Air Conditioning (HVAC) provides students with theory and hands-on instruction regarding troubleshooting and repair of heavy-duty truck air conditioning systems. Topics include condensers; check valves; driers; compressors; evaporators; controls; heating and cooling systems and controls; and refrigerant handling.

Objectives:

- Discuss the function of the heating ventilation and air conditioning systems.
- Demonstrate proper use of an HVAC recovery machine.
- Diagnose, repair, and recharge vehicle HVAC systems in accordance with EPA laws and regulations.

UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Electronics Technology
FY2026 / 17 Credits (510 Clock-Hours)

Electronics Technology

Institutions: Bridgerland, Salt Lake

Technical Certificate (Catalog Year: 2026, 17 Credits/510 Clock-Hours Required, CIP 47.0105)

Foundational Courses (17 Credits/510 Clock-Hours)		**Credits**	**Clock-Hours**
TEET 1040	Electronics Assembly and Soldering	1	30
TEET 1060	DC Electronics	4	120
TEET 1070	AC Electronics	4	120
TEET 1080	Analog Electronics	4	120
TEET 1090	Digital Fundamentals	4	120
Supplemental Courses			
Bridgerland (7 Credits/210 Clock-Hours)			
TEET 1030	IPC-A-610 Certification: Acceptability of Electronic Assemblies	1	30
TEET 1100	Microcontrollers I	2	60
TEET 1105	Microcontrollers II	2	60
TEET 1110	Instrumentation	3	90
TEET 1130	IPC-J-STD-001 Certification: Requirements for Soldered Electronic Assemblies	1	30
TEET 1140	IPC-WHMA-A-620 Certification: Cable and Wire Harness Assemblies	1	30
TEET 1150	PCB Design and Fabrication	2	60
TEET 1160	Electronics Final Project	2	60
TEET 1181	Industry Related Certifications/Seminars	2	60
TEET 1801	Special Applications	2	60
TEET 2999	Electronics Externship	4	180
TEAM 1060	Motor Controls	3	90
TEAM 1070	Programmable Logic Controllers	4	120
TEAM 1110	Introduction to Industrial Robotics	2	60
TEAM 1120	3D Modeling	2	60
Salt Lake (7 Credits/210 Clock-Hours)			
TEET 1030	IPC-A-610 Certification: Acceptability of Electronic Assemblies	1	30
TEET 1110	Instrumentation	3	90
TEET 1190	Troubleshooting	3	90
TEET 1200	Certified Electronics Technician	1	30

May 18, 2023
Adjusted October 31, 2024

Utah System of Higher Education
Electronics Technology
FY2026 / 17 Credits (510 Clock-Hours)

PROGRAM DESCRIPTION

The Electronics Technology program supports a wide variety of electronic systems. This accredited program prepares students with the necessary skills to become technicians in several critical electronic related industries. Students are introduced to a wide variety of tools, instruments, power supplies, signal generators, practices, and procedures. The program uses a competency based hands-on approach, with other teaching methods that will be employed throughout. Internationally recognized IPC certifications are available in this program. This program prepares students to pass a nationally recognized Certified Electronics Technician exam.

Objectives:

- Demonstrate a working knowledge of electronic systems, prototyping, maintenance, and repair techniques.
- Apply system diagnostics and troubleshooting techniques.
- Read, utilize, and design schematics.
- Demonstrate competency in thru-hole and surface mount soldering for electronic assemblies.
- Demonstrate competency in DC and AC circuit concepts, component characteristics, circuit prototyping and testing.
- Demonstrate competency in Analog and Digital circuit concepts, component characteristics, circuit prototyping and testing.
- Implement and properly use a variety of precision electronic measurement tools and procedures.
- Demonstrate a working knowledge of safety practices and procedures.

FOUNDATIONAL COURSE DESCRIPTIONS

Electronics Assembly and Soldering **1 Credit/30 Clock-Hours**

In the Electronics Assembly and Soldering course, students develop the ability to solder and desolder connectors, components, and printed circuit boards using industry standards. Topics include component identification, safety practices, soldering, desoldering, anti-static grounding, and surface mount techniques.

Objectives:

- Apply ESD industry safety and handling practices.
- Select the proper hand-tools and materials for an assembly procedure.
- Maintain and utilize soldering equipment.
- Prepare wire for electronic assemblies and complete wire splices.
- Solder wires to various terminals.
- Solder axial-leaded and multi-leaded through-hole components.
- Solder surface-mount components.
- Identify components, hardware, and wires.

DC Electronics **4 Credits/120 Clock-Hours**

The DC Electronics course covers direct current (DC) basics, electrical safety, components, Ohms law and power calculations, electrical measurements, series and parallel circuits, and power supplies. The course is a balance of theory, and hands-on, including measurements, troubleshooting, and circuit construction.

Objectives:

- Recognize and describe electronic circuits, systems, and electrical hazards while practicing basic safety protocols.
- Use the relationships between voltage, resistance, and current to analyze DC circuits with Ohm's and power law equations.
- Use, test, and select various electronic components as needed to prototype circuits using schematic diagrams.
- Analyze the properties of magnetism.
- Utilize different types of multimeters to perform electronic measurements of voltage, current and resistance.
- Perform series, parallel and series-parallel combination circuits calculations and measurements, analyze circuits for faulty components.
- Analyze voltage divider, bridge, maximum power transfer circuits.
- Apply Kirchhoff's voltage and current laws to analyze complex DC circuits using theorem analyses.

AC Electronics — 4 Credits/120 Clock-Hours

The AC Electronics course covers the principles of alternating current (AC), inductance, capacitance, transformers, RC, RL, RCL principles and circuits. It also covers passive filters, AC calculations and measurements, troubleshooting, and use of oscilloscopes and function generators.

Objectives:

- Apply alternating current fundamentals of voltage, current, resistance and Ohm's law.
- Apply function generators and oscilloscopes to AC circuits.
- Determine values and measure characteristics of transformers.
- Use schematic diagrams and symbols to prototype AC circuits.
- Explain the use of capacitors and inductors.
- Perform RL and RC series and parallel circuit calculations and measurements including filter and time constant circuits.
- Analyze the characteristics of series and parallel resistive/reactive (RCL) circuits.
- Discuss series and parallel resonance circuits.

Analog Electronics — 4 Credits/120 Clock-Hours

The Analog Electronics course covers semiconductor technology and active devices such as diodes, transistors, thyristors, optoelectronics, and operational amplifiers. Students explore instrumentation operational amplifier circuits, IC characteristics, power supply circuits, regulators, transistor amplifiers, active filters, and oscillators while performing circuit construction and troubleshooting.

Objectives:

- Identify basic diode applications.
- Design, build, and test basic rectifiers and power supplies.
- Design, build, and test transistor bias circuits.
- Use small-signal, power, and FET amplifiers.
- Demonstrate amplifier frequency response and voltage regulators.
- Use thyristors such as SCRs and Triacs.
- Construct and analyze oscillator circuits.
- Design, prototype, and troubleshoot analog operational amplifier circuits.

Digital Fundamentals **4 Credits/120 Clock-Hours**

The Digital Fundamentals course covers digital concepts, safety, and digital systems. It covers common digital numbering systems, Analog to Digital (A/D) and Digital to Analog (D/A) conversion circuits and interfacing techniques. It also covers the basics of truth tables, logic gates, counters, shift registers, sequential and combinational logic circuits. Students learn usage of digital test equipment for prototyping, measuring, and troubleshooting digital circuits.

Objectives:

- Apply digital concepts, logic gates, logic functions, datasheets, and truth tables.
- Apply safety precautions, CMOS devices, and ESD/EOS.
- Apply digital schematics, wiring and block diagrams.
- Apply numbering systems, conversions, Boolean algebra, simplification, and digital coding.
- Apply digital test equipment and measurements.
- Apply sequential and combinational logic circuitry, counters, decoders, and conversion circuits.
- Apply troubleshooting digital circuits and systems.
- Apply programmable logic devices (PLDs).

SUPPLEMENTAL (ELECTIVE) COURSE DESCRIPTIONS

Bridgerland

IPC-A-610 Certification: Acceptability of Electronic Assemblies **1 Credit/30 Clock-Hours**

The IPC-A-610 Certification: Acceptability of Electronic Assemblies course prepares students to obtain their certification. The Acceptability of Electronic Assemblies certification is the industry standard program for quality assurance/visual acceptance of electronic assemblies based on the world's most widely used electronics assembly acceptability standard. Students become Certified IPC Specialist (CIS) with the IPC-A-610 certification: Acceptability of Electronic Assemblies.

Objectives:

- Discuss the purpose, contents, specifications, and terms contained within the IPC-A-610 specification.
- Recognize proper handling, ESD requirements and cleanliness.
- Recognize acceptability requirements for discrete wiring assembly.
- Identify acceptable mechanical assembly requirements.
- Identify the requirements for soldering assemblies and recognize the acceptability requirements for high voltage.
- Recognize all criteria related to terminal connections.
- Recognize the requirements for component installation including orientation, mounting, lead forming, damage, wire/lead termination.
- Recognize the requirements for surface mount assemblies.

Microcontrollers I **2 Credits/60 Clock-Hours**

The Microcontrollers I course is a study in microcontroller architecture, arithmetic, programming, and interfacing. Emphasis placed on laboratory experiments dealing with microcontroller circuit build, program execution and interfacing. In this project-based course students work with an industry standard platform

such as Arduino, Microchip, etc. Students put together a series of projects that they design, build, program, and test for the instructor's approval.

Objectives:

- Design and build microcontroller circuits.
- Program and test microcontroller circuits using structured text.
- Apply peripheral interfacing in software and hardware.
- Use interrupt control.
- Use software development tools.
- Use a C based programming language.

Microcontrollers II **2 Credits/60 Clock-Hours**

The Microcontrollers II course is an advanced study in microcontroller architecture, arithmetic, programming, and interfacing. Emphasis is placed on laboratory experiments dealing with microcontroller circuit building, program execution, and interfacing. This course includes advanced topics and projects such as communication interfaces, I2C bus, SPI bus, interfacing with liquid crystal displays, hardware and timer interrupts, and data logging with SD cards. An integrated final project is required.

Objectives:

- Design and build advanced microcontroller circuits.
- Program and test advanced microcontroller circuits.
- Apply advanced peripheral interfacing in software and hardware.

Instrumentation **3 Credits/90 Clock-Hours**

The Instrumentation course explores scientific data collection systems used for natural resources, agriculture, industry, land survey and other markets. Students learn about various sensors, measurement devices, data communications, mobile data technology, power devices, regulators, software, and control devices.

Objectives:

- Use data acquisition systems.
- Use sensors to measure a broad array of parameters for environmental, water resource, research, and industrial applications.
- Demonstrate various procedures to perform calibration efficiently and effectively.
- Analyze sensors output electrical signals and transmit to data loggers.
- Connect sensors to data loggers and other devices.
- Examine different physical principles used in measurement sensors.
- Identify and connect capacitive, inductive, and resistive type sensors.
- Perform sensor measurements using various transducers.

IPC-J-STD-001 Certification: Requirements for Soldered Electronic Assemblies
1 Credit/30 Clock-Hours

The IPC-J-STD-001 Certification course is an industry standard program for hand and machine soldering process and material requirements. Students become Certified IPC Specialist (CIS) with the IPC J-STD-001 certification. The course includes hands-on training and concludes with a qualifying examination. With this portable credential, students receive immediate recognition and value throughout the electronics industry.

Objectives:

- Recognize general safety requirements, necessary tools, and effects of electrostatic discharge (ESD).
- Make acceptable wire and terminal assemblies.
- Make acceptable through hole solder connections.
- Make acceptable surface mount solder connections.
- Identify general soldered connection acceptance requirements.
- Identify machine and reflow soldering process requirements.
- Recognize IPC Test methods and related standards.
- Pass the IPC J-STD-001 written and hands-on exams.

IPC-WHMA-A-620 Certification: Cable and Wire Harness Assemblies **1 Credit/30 Clock-Hours**

The IPC-WHMA-A-620 Certification course is an industry standard program for cable and wire harness fabrication and installation. This training familiarizes students with the general requirements of the IPC/WHMA-A-620 Requirements and Acceptance for Cable and Harness Assemblies and concludes with a qualifying examination. Upon successful completion of this training program, participants will be certified as Application Specialists. With this portable credential, students receive immediate recognition and value throughout the electronics industry.

Objectives:

- Perform cable/wire preparation, measuring, and testing of cable assemblies.
- Make crimp terminations and insulation displacement connections.
- Make proper soldered terminations and learn about high voltage applications.
- Explain connectorization and Over-Molding/Potting.
- Make professional splices, Coaxial/Biaxial Cable Assemblies, and learn about Ultrasonic Welding.
- Discuss the importance of marking/labeling, wire bundle securing, shielding, and protective coverings.
- Complete common cable assemblies with correct terminations.

PCB Design and Fabrication **2 Credits/60 Clock-Hours**

The PCB Design and Fabrication course is an introduction to PCB (Printed Circuit Board) design, schematic capture, layout, and fabrication. Students are taught how to prepare the CAD layout artwork while generating necessary files to run a CNC PCB mill in-house and to send to a 3rd party vendor to fabricate a PCB. This course culminates with a final project where a board is fabricated, stuffed, soldered, and tested.

Objectives:

- Use schematic capture to develop an electronic schematic.
- Show how to use the parts library and how to make parts not found in the library.
- Identify electronic symbols, components, references, and footprints using available libraries.
- Generate a netlist and use it to develop a printed circuit board layout drawing.
- Use design rule checker for signal integrity and proper board layout.
- Generate necessary files to put PCB into production.
- Fabricate a printed circuit board in-house using a CNC PCB router.
- Create Gerber files to send off to a vendor to produce a printed circuit board.

Electronics Final Project — 2 Credits/60 Clock-Hours

The Electronics Final Project course challenges students to complete a project including design, layout, construction, operation, and debugging while meeting the given specifications and time limitations. This may include consumer repair projects upon instructor approval. This course can also include instructor aid project hours as assigned by the instructor.

Objectives:

- Develop schematics for all aspects of the project.
- Develop and submit a required parts list to the instructor.
- Develop a project action plan.
- Meet all project specifications.
- Complete the project within the given time.
- Operate and debug the project to proper operating specifications.

Industry Related Certifications/Seminars — 2 Credits/60 Clock-Hours

The Industry Related Certifications/Seminars course is for electronics technology related certifications received at seminars, symposiums, or conferences attended beyond the basic certificate program classes listed. Credit is given in 30 hour increments up to a maximum of 120 hours as approved by the program instructor.

Objectives:

- These objectives will be determined on an individual course basis upon instructor approval of the certification course or seminar the student will attend.

Special Applications — 2 Credits/60 Clock-Hours

The Special Applications course provides students unique or advanced skill development identified as an immediate need in the current occupational industry.

Objectives:

- These objectives will be determined on an individual course basis upon instructor approval of the course taken or the skill developed.

Electronics Externship — 4 Credits/180 Clock-Hours

The Electronics Externship course links students with employers to provide students with a hands-on insight into the manufacturing and/or electronic technician position. Students shadow an experienced technician. and receive personalized feedback. Students work with their instructor to develop an action plan for improvement. Relevant courses must be completed prior to or in concurrence with the externship.

Objectives:

- Work safely, effectively, and efficiently in electronic/electrical installation, troubleshooting, and repairs.
- Work effectively under downtime situations.
- Communicate effectively with management, technicians, and production associates.
- Demonstrate the proper work ethics, teamwork, and personal management skills.

Motor Controls — 3 Credits/90 Clock-Hours

The Motor Controls course prepares students with a working knowledge and understanding of real-world motor control operations. Students who complete this course are able to proficiently setup and design motor control circuits utilizing schematics. Students in this course identify components and utilize instrumentation to troubleshoot and maintain systems.

Objectives:

- Demonstrate a working knowledge of safety practices and procedures.
- Operate, install, maintain, and design motor control circuits.
- Demonstrate a working knowledge of commonly used components, devices, and tools.
- Demonstrate a working knowledge of various control systems.
- Apply systems diagnostics and troubleshooting of motor control circuits.

Programmable Logic Controllers — 4 Credits/120 Clock-Hours

The Programmable Logic Controllers course teaches students to interface with programmable logic controllers (PLCs). Programmable logic controllers are the brains of all modern automation technology systems. In this course students develop a working knowledge and skill set in the following competencies: ladder logic, programming standards, hardware selection, various inputs and outputs, communication, troubleshooting, setup and installation.

Objectives:

- Demonstrate a working knowledge of safety practices and procedures.
- Operate, install, maintain, and program programmable logic controller systems.
- Demonstrate working knowledge of ladder logic programming.
- Apply motor control logic within a programmable logic controller system.
- Apply timers and event sequencing within a programmable logic controller system.
- Configure inputs and outputs for various applications.
- Apply systems diagnostics and troubleshooting of programmable logic control circuit.

Introduction to Industrial Robotics — 2 Credits/60 Clock-Hours

The Introduction to Industrial Robotics course is an introduction to industrial robot architecture, arithmetic, programming, and simulation. Emphasis is placed on laboratory experiments dealing with simple robot programming, and program execution. In this project-based course, students are given industry recognized simulation software for lab completion. Students put together a series of projects that they program and test for the instructor's approval. A hands-on experience with real industrial robots is also required.

Objectives:

- Determine the working specifications and architecture of a robot arm.
- Calculate necessary arithmetic, geometry, and trigonometry relative to robot arms.
- Program a robot arm through industry specific simulation software.
- Test and execute robot arm programs in industry recognized simulators.
- Test and execute a robot arm program with industrial robots.
- Identify what types of robots are available for Industrial and servicing applications.

3D Modeling **2 Credits/60 Clock-Hours**

The 3D Modeling course introduces concepts and techniques of 3D, feature-based, parametric modeling using SolidWorks as the modeling tool. Students are taught the SolidWorks user interface, menus, toolbars, and commands used to create 2D sketches, 3D parts and assemblies. The course covers all topics on the CSWA (Certified SolidWorks Associate) exam and practice tests are provided if certification is desired. Students who have completed this course are able to design brackets, tooling, precision fixtures, safety guarding and similar parts to keep existing equipment working and also to make improvements where needed.

Objectives:

- Use the SolidWorks program and user interface.
- Recognize the file formats and document properties used with SolidWorks.
- Customize SolidWorks to fit your needs.
- Manipulate model views and orientation.
- Practice the fundamentals of fully defining 2D sketches and 3D geometry.
- Practice basic and advanced feature creation to build models.
- Practice creating assemblies from modeled components.
- Create 2D drawings from parts and assemblies.

Salt Lake

IPC-A-610 Certification: Acceptability of Electronic Assemblies **1 Credit/30 Clock-Hours**

The IPC-A-610 Certification: Acceptability of Electronic Assemblies course prepares students to obtain their certification. The Acceptability of Electronic Assemblies certification is the industry standard program for quality assurance/visual acceptance of electronic assemblies based on the world's most widely used electronics assembly acceptability standard. Students become Certified IPC Specialist (CIS) with the IPC-A-610 certification: Acceptability of Electronic Assemblies.

Objectives:

- Discuss the purpose, contents, specifications, and terms contained within the IPC-A-610 specification.
- Recognize proper handling, ESD requirements and cleanliness.
- Recognize acceptability requirements for discrete wiring assembly.
- Identify acceptable mechanical assembly requirements.
- Identify the requirements for soldering assemblies and recognize the acceptability requirements for high voltage.
- Recognize all criteria related to terminal connections.
- Recognize the requirements for component installation including orientation, mounting, lead forming, damage, wire/lead termination.
- Recognize the requirements for surface mount assemblies.

Instrumentation **3 Credits/90 Clock-Hours**

The Instrumentation course explores scientific data collection systems used for natural resources, agriculture, industry, land survey and other markets. Students will learn about various sensors, measurement devices, data communications, mobile data technology, power devices, regulators, software, and control devices.

Objectives:

- Use data acquisition systems.
- Use sensors to measure a broad array of parameters for environmental, water resource, research, and industrial applications.
- Demonstrate various procedures to perform calibration efficiently and effectively.
- Analyze sensors output electrical signals and transmit to data loggers.
- Connect sensors to data loggers and other devices.
- Examine different physical principles used in measurement sensors.
- Identify and connect capacitive, inductive, and resistive type sensors.
- Perform sensor measurements using various transducers.

Troubleshooting **3 Credits/90 Clock-Hours**

This Troubleshooting course covers principles, techniques, and procedures for troubleshooting electronics circuits using test equipment. The course will cover power supplies, DC, AC, analog, and digital systems. Emphasis is on ability to troubleshoot and find faults in common electronic circuits.

Objectives:

- Determine faults for DC circuits by applying troubleshooting techniques.
- Determine faults for AC circuits by applying troubleshooting techniques.
- Determine faults for Analog circuits by applying troubleshooting techniques.
- Determine faults for Digital circuits by applying troubleshooting techniques.
- Use various test equipment in troubleshooting.
- Apply a logical, systematic approach to analyze the circuit's behavior.
- Use schematics, block diagrams, and test instruments to identify defective components and circuits.

Certified Electronics Technician **1 Credit/30 Clock-Hours**

The Certified Electronics Technician course prepares students to take the ETA-I Associate Technician Certification exam.

Objectives:

- Demonstrate knowledge of all topics covered in the previous core courses.
- Demonstrate the ability to pass a practice certification exam.
- Pass the actual ISCET or ETA Associate-level Technician exam.

UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Information Technology
FY2026 / 12 Credits (360 Clock-Hours)

Information Technology

Institutions: Bridgerland, Davis, Dixie, Mountainland, Ogden-Weber, Salt Lake, Snow, Southwest, Tooele, Uintah Basin, USU-Eastern

Technical Certificate (Catalog Year: 2026, 12 Credits/360 Clock-Hours Required, CIP: 11.0901)

Foundational (12 Credits/360 Clock-Hours)		**Credits**	**Clock-Hours**
TEIT 1050	Career & Workplace Relations	1	30
TEIT 1100	Introduction to Networking	1	30
TEIT 1170	Computer Networks I	2	60
TEIT 1200	A+ Core I	3	90
TEIT 1210	A+ Core II	3	90
TEIT 1300	Linux Foundations	2	60
Supplemental (Electives)			
Bridgerland (6 Credits/180 Clock-Hours)			
TEIT 1040	Introduction to Virtualization	1	30
TEIT 1290	Linux Computing with Raspberry Pi	2	60
TEIT 1400	Introduction to Cloud	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 2140	Network Traffic Analysis	1	30
TEIT 2170	Computer Networks II	3	90
TEIT 2200	Security +	4	120
TEIT 2998	Service Desk Internship	2	90
TEIT 2999	IT Externship	2	90
TEDA 1030	Python Fundamentals	3	90
Davis (6 Credits/180 Clock-Hours)			
TEIT 1000	Information Technology Fundamentals	2	60
TEIT 1020	Foundations of Computing	2	60
TEIT 1040	Introduction to Virtualization	1	30
TEIT 1400	Introduction to Cloud	2	60
TEIT 1500	Introduction to Scripting	1	30
TEIT 1600	Microsoft 365 Fundamentals	3	90
TEIT 1630	Microsoft Windows Server Administration Fundamentals	2	60
TEIT 1640	Deploying the Modern Desktop	1	30
TEIT 1650	Remote Desktop Technologies	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 2170	Computer Networks II	3	90
Dixie (16 Credits/480 Clock-Hours)			
TEIT 1105	Extended Networks	1	30
TEIT 1215	Extended A+	2	60
TEIT 1405	Introduction to Cloud Computing	4	120
TEIT 2170	Computer Networks II	3	90
TEIT 2205	Security +	6	180
TEIT 2951	Final Project	3	90
Mountainland (6 Credits/180 Clock-Hours)			

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UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Information Technology
FY2026 / 12 Credits (360 Clock-Hours)

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
TEIT 2170	Computer Networks II	3	90
Ogden-Weber (6 Credits/180 Clock-Hours)			
TEIT 1000	Information Technology Fundamentals	2	60
TEIT 1040	Introduction to Virtualization	1	30
TEIT 1110	Introduction to Cybersecurity	1	30
TEIT 1400	Introduction to Cloud	2	60
TEIT 1500	Introduction to Scripting	1	30
TEIT 1660	Server+	4	120
TEIT 1670	Windows Administration	4	120
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 1943	Intermediate Service Desk	2	90
TEIT 2170	Computer Networks II	3	90
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
Salt Lake (6 Credits/180 Clock-Hours)			
TEIT 1000	Information Technology Fundamentals	2	60
TEIT 1110	Introduction to Cybersecurity	1	30
TEIT 1400	Introduction to Cloud	2	60
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 2170	Computer Networks II	3	90
TEIT 2200	Security +	4	120
Snow (6 Credits/180 Clock-Hours)			
TEIT 1010	Orientation	1	30
TEIT 1130	Networking Essentials	2	60
TEIT 1510	Introduction to IOT	3	90
TEIT 2170	Computer Networks II	3	90
Southwest (6 Credits/180 Clock-Hours)			
TEIT 1800	Certification Test Prep I	1	30
TEIT 1810	Certification Test Prep II	1	30
TEIT 2170	Computer Networks II	3	90
TEIT 2200	Security +	4	120
TEIT 2920	Special Projects II	2	60
Tooele (6 Credits/180 Clock-Hours)			
TEIT 1800	Certification Test Prep I	1	30

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UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Information Technology
FY2026 / 12 Credits (360 Clock-Hours)

TEIT 1810	Certification Test Prep II	1	30
TEIT 2170	Computer Networks II	3	90
TEIT 2200	Security +	4	120
Uintah Basin (6 Credits/180 Clock-Hours)			
TEIT 1012	Introduction to Python	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
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 1910	Telecommunications	2	60
TEIT 2106	Technical Installation	2	60
TEIT 2170	Computer Networks II	3	90
USU - Eastern (6 Credits/180 Clock-Hours)			
TEIT 1041	Introduction to Programming	3	90
TEIT 1310	Website Design	3	90
TEIT 2170	Computer Networks II	3	90
TEIT 2500	Web Business	3	90
TEBP 1200	Professionalism	3	90

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Adjusted October 31, 2024

Utah System of Higher Education
Information Technology
FY2026 / 12 Credits (360 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 labs 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 which may include CompTIA A+, Network +, Security+, Cisco Certified Support Technician (CCST), 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.

FOUNDATIONAL COURSE DESCRIPTIONS

Career and Workplace Relations — 1 Credit/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.

Introduction to Networking — 1 Credit/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.

Computer Networks I **2 Credits/60 Clock-Hours**

Computer Networks I explores common computer networking models, network device installation and configuration, switching and routing technologies, IP address configuration, basic wireless network configuration, and network troubleshooting tools and methodology. This course aligns with objectives from popular networking certifications.

Objectives:

- Differentiate the purpose of each layer in the Open Systems Interconnection (OSI) model.
- Install and configure common networking devices, components, and services.
- Identify characteristics of switching and routing technologies and features.
- Plan and configure IPv4 and IPv6 network addresses and services.
- Configure a small office/home office (SOHO) wireless network.
- Use the appropriate methodology, tools, and protocols to troubleshoot and resolve networking issues.

A+ Core I **3 Credits/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 Credits/90 Clock-Hours**

A+ Core II is a follow-up to A+ CoreI 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.

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 application installation and management.

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.

SUPPLEMENTAL (ELECTIVE) COURSE DESCRIPTIONS

Bridgerland

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.

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.

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.

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.

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.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

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.

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.

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.

Python Fundamentals **3 Credits/90 Clock-Hours**

The Python Programming course introduces the Python programming language. Topics include basic Python syntax, procedural programming concepts, data types, decision and control structures, working with data analytics-related Python libraries, and creating and running functions. Students use both command prompt and industry standard integrated development environments (IDEs) to create and run their Python code. Students completing this course are able to perform basic tasks in Python related to the work of the entry-level data practitioner.

Objectives:

- Demonstrate competency using an interactive development environment to write Python code.
- Write basic Python code to structure, clean, and analyze data.
- Demonstrate competency with conditionals for decision and control structures and data modifications.
- Demonstrate proficiency with for loop and while loop coding.
- Demonstrate proficiency with data types and functions for analysis and use of data.

Davis

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.

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.

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 Credit/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 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 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.

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.

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.

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.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

Dixie

Extended Networks **1 Credit/30 Clock-Hours**

This course provides additional instruction on the installation, configuration and management of computer networks.

Objectives:

- Install and apply simulation Software such as Cisco Packet Tracer.
- Design, configure and connect network hardware for a simulated Local Area Network.
- Execute and test network function and traffic.

Extended A+ **2 Credits/60 Clock-Hours**

This course provides added instruction on installing, configuring, securing, and troubleshooting typical computer and mobile device operating systems, settings, and applications. Common operating systems such as Windows, Android, Linux, and Mac OS X are discussed in this course. Students receive education through instruction, virtual labs, simulations, and/or hands-on activities. As well as certification practice exams. This section of the course aligns with the objectives of the CompTIA A+ Core 1 & 2 certification exams.

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.
- 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.

Introduction to Cloud Computing **4 Credits/120 Clock-Hours**

This course provides instruction on basic cloud concepts such as migration, storage, virtual machines, DevOps and troubleshooting through lessons, demonstrations, exams, and hands-on virtual labs. This Course is designed to prepare students to complete all the requirements for the AWS Cloud Practitioner Certification Exam.

Objectives:

- Identify cloud types.
- Recognize cloud services and functionalities.
- Configure and work with Cloud Storage.
- Configure virtual network infrastructure.
- Install and configure the basics of Cloud security.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

Security + **6 Credits/180 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:

- Identify and implement access control and Identity management protocols.
- Enforce security policies, procedures, and awareness programs.
- Conduct physical security assessments and implement measures.
- Configure perimeter defenses strategies.
- Administer and maintain network defense controls and protocols.
- Execute host defense strategies.
- Apply application security measures and defenses.
- Configure and implement data security protocols and defenses.
- Conduct audits and assessments and implement findings.
- Apply cryptography and PKI protocols.

Final Project **3 Credits/90 Clock-Hours**

In this course, students will demonstrate knowledge and competency in all areas of the Information Technology program. Students will actively design, connect and configure all the devices and components needed to simulate multiple Local Area Networks (LAN) and connect them together to simulate a functioning Wide Area Network with complete interconnectivity.

Objectives:

- Demonstrate the ability to troubleshoot, repair and maintain computing equipment.
- Install and configure operating systems for both servers and workstations.
- Configure and set group policy for Active Directory.
- Setup and configure networking equipment.
- Demonstrate the ability to set up and maintain security of a network, and associated equipment.
- Incorporate cloud technologies into an existing network.

Mountainland

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.

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.

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.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

Ogden-Weber

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.

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.

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 Cybersecurity **1 Credit/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.
- 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 Credit/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.

Server + **4 Credits/120 Clock-Hours**

This course will focus on server hardware and software installation and management, server administration, security and disaster recovery, and Troubleshooting. This course is built around hands-on labs to facilitate a complete learning experience in preparation to take the Server+ CompTIA Certification.

Server concepts in all the major operating systems (Mac OS, Windows, and Linux) will be covered in this course.

Objectives:

- Build, maintain, troubleshoot, secure and support server hardware and software technologies, including virtualization.
- Identify environmental issues.
- Explain disaster recovery and general security procedures.
- Identify industry terminology and concepts.
- Discuss server roles and their interaction in a dynamic computing environment.

Windows Administration **4 Credits/120 Clock-Hours**

This course will improve upon the Windows Administration concepts covered in A+ and will expose students to higher levels of Windows Administration tools and functions. This course will explore Windows in-depth administration concepts such as imaging, user settings and preferences, Windows security, Group Policy, registry settings, and general Windows troubleshooting.

Objectives:

- Install and configure Windows operating systems.
- Create and manage user accounts.
- Implement system recovery and file protection.
- Manage group policy settings.
- Perform remote management and troubleshooting.
- Explore system monitoring.

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.

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.

Intermediate Service Desk **2 Credits/90 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.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

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.
- 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.

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.

Salt Lake

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.

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.

Introduction to Cybersecurity **1 Credit/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.
- 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.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

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

Orientation **1 Credit/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 Credits/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.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.

- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

Southwest

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.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

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.

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.

Tooele

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.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

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.

Uintah Basin

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.

Introduction to Scripting **1 Credit/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.

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.

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.

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.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

USU - Eastern

Introduction to Programming **3 Credits/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.

Website Design **3 Credits/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).

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

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

Utah System of Higher Education
Medical Coding and Billing
FY2026 / 21 Credits (630 Clock-Hours)

Medical Coding and Billing

Institutions: Davis, Mountainland, Ogden-Weber, Salt Lake

Technical Certificate (Catalog Year: 2026, 21 Credits/630 Clock-Hours Required, CIP: 51.0713)

Foundational Courses (21 Credits/630 Clock-Hours)		**Credits**	**Clock-Hours**
TEMC 1051	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 1121	Coding II	3	90
TEMC 1131	Coding III	3	90
TEMC 1140	Coding IV	3	90
TEMC 1900	Coding Certification Exam Prep	2	60
Supplemental Courses			
Davis (9 Credits/270 Clock-Hours)			
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 1100	Digital Literacy	2	60
Mountainland (9 Credits/270 Clock-Hours)			
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 (9 Credits/270 Clock-Hours)			
TEMC 1033	Introduction to Medical Coding/Healthcare Communication and Customer Service	1	30
TEMC 1040	Introduction to Medical Billing	1	30
TEMC 1081	Medical Terminology and Anatomy/Physiology I	3	90
TEMA 1082	Medical Terminology and Anatomy/Physiology II	3	90
Salt Lake (9 Credits/270 Clock-Hours)			
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

March 24, 2023
Adjusted October 31, 2024

Utah System of Higher Education
Medical Coding and Billing
FY2026 / 21 Credits (630 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.

FOUNDATIONAL 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).

- Recognize various health Insurance models and explain best practices and tools for ensuring accurate and timely submission of medical claims for payment.
- Explain the impact of coding compliance, clinical documentation improvement (CDI), and coding for necessity.

Medical Insurance Billing II **3 Credits/90 Clock-Hours**

Medical Insurance Billing II provides students with advanced skills to perform and understand current processes regarding billing and collection concepts, regulations, and guidelines. Upon completion of this course, students will 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.

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.
- Review diagnoses common to the respiratory system.
- 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.
- Describe basic anatomy and functions of the hemic and lymphatic systems, and the mediastinum and diaphragm.
- Review diagnoses common to the hemic and lymphatic systems, and the mediastinum and diaphragm.
- 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.

- 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.

SUPPLEMENTAL COURSE DESCRIPTIONS

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 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.

Digital Literacy **2 Credits/60 Clock-Hours**

Digital literacy explores the latest 21st-century technology. Students will practice appropriately and effectively using tools for productivity, collaboration, and communications; finding reliable information;

creating content; communicating safely; and identifying credibility and bias in modern digital environments.

Objectives:

- Demonstrate digital citizenship and appropriate interpersonal digital information.
- Describe concepts relating to common digital environments, software, hardware, and operating systems.
- Describe digital security threats and explain how to protect personal devices and digital content.
- Use digital tools and technologies to collaborate.
- Create, edit, and save digital content and manage digital information.
- Navigate the internet and evaluate the integrity of digital information.

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.
- 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.

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/Healthcare Communication and Customer Service
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 highlighting the basic tools and resources used by medical coders in the performance of their duties. The student will also be introduced to key communication and customer service skills as they pertain to the healthcare industry.

Objectives:

- Comprehend the meaning of Medical Coding and recognize the difference between Medical Coding and Medical Billing.
- Explore the primary code classification systems used by Medical Coders and Medical Billers and the purpose of ICD-10-CM, CPT and HCPCS Level II codes to demonstrate ability to perform a basic diagnosis and procedure code search.
- Compare professional, therapeutic, and social communications.
- Contrast verbal and nonverbal communication by using examples. Discuss HIPAA rules for both email and fax.
- Identify the elements and interpretations of body language and describe practical ways to personally begin to understand and implement therapeutic multicultural communication.
- List essential guidelines for therapeutic communication for each age group and identify cultural differences in grief and death experiences.

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.
- Describe the different approaches to collections.

Medical Terminology and Anatomy/Physiology 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/Physiology II **3 Credits/90 Clock-Hours**

This course is a continuation of Terminology & Anatomy/Physiology 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.

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.
- 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.
- 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

Utah System of Higher Education
Networking and Cybersecurity
FY2026 / 21 Credits (630 Clock-Hours)

Networking and Cybersecurity

Institutions: Davis, Ogden-Weber, Salt Lake, Snow, Tooele, Uintah Basin, USU-Eastern

Technical Certificate (Catalog Year: 2026, 21 Credits/630 Clock-Hours Required, CIP: 11.0901)

Foundational Courses (21 Credits/630 Clock-Hours)		**Credits**	**Clock-Hours**
TEIT 1050	Career & Workplace Relations	1	30
TEIT 1100	Introduction to Networking	1	30
TEIT 1170	Computer Networks I	2	60
TEIT 1200	A+ Core I	3	90
TEIT 1210	A+ Core II	3	90
TEIT 1300	Linux Foundations	2	60
TEIT 1400	Introduction to Cloud	2	60
TEIT 2170	Computer Networks II	3	90
TEIT 2200	Security +	4	120
Supplemental Courses			
Davis (9 Credits/270 Clock-Hours)			
TEIT 1000	Information Technology Fundamentals	2	60
TEIT 1040	Introduction to Virtualization	1	30
TEIT 1150	Cisco CCNA Introduction to Networks	3	90
TEIT 1160	Cisco CCNA Switching, Routing, and Wireless Essentials (SWRE)	3	90
TEIT 1500	Introduction to Scripting	1	30
TEIT 1600	Microsoft 365 Fundamentals	3	90
TEIT 1630	Microsoft Windows Server Administration Fundamentals	2	60
TEIT 1640	Deploying the Modern Desktop	1	30
TEIT 1650	Remote Desktop Technologies	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 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
Ogden-Weber (9 Credits/270 Clock-Hours)			
TEIT 1000	Information Technology Fundamentals	2	60
TEIT 1040	Introduction to Virtualization	1	30
TEIT 1110	Introduction to Cybersecurity	1	30
TEIT 1500	Introduction to Scripting	1	30
TEIT 1660	Server+	4	120
TEIT 1670	Windows Administration	4	120
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 1943	Intermediate Service Desk	2	90
TEIT 2250	Ethical Hacking	3	90
TEIT 2270	Cybersecurity Analysis	3	90

May 18, 2023
Adjusted October 31, 2024

UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Networking and Cybersecurity
FY2026 / 21 Credits (630 Clock-Hours)

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
Salt Lake (9 Credits/270 Clock-Hours)			
TEIT 1110	Introduction to Cybersecurity	1	30
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
Snow (9 Credits/270 Clock-Hours)			
TEIT 1010	Orientation	1	30
TEIT 1130	Networking Essentials	2	60
TEIT 1510	Introduction to IOT	3	90
TEIT 2310	Cybersecurity Essentials	3	90
Tooele (9 Credits/270 Clock-Hours)			
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 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 1830	Certification Test Prep IV	1	30
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 2150	Cisco CCNA Enterprise Networking, Security, and Automation (ENSA)	3	90
TEIT 2250	Ethical Hacking	3	90
TEIT 2270	Cybersecurity Analysis	3	90
TEIT 2300	Linux +	3	90
TEIT 2320	Hybrid Server Core	4	120
TEIT 2330	Hybrid Server Advanced	4	120
TEIT 2910	Special Projects I	1	30
TEIT 2920	Special Projects II	2	60
TEIT 2930	Special Projects III	3	90
Uintah Basin (9 Credits/270 Clock-Hours)			
TEIT 1012	Introduction to Python	2	60
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
TEIT 1840	Certification Test Prep V	1	30
TEIT 1850	Certification Test Prep VI	1	30
TEIT 1910	Telecommunications	2	60
TEIT 2106	Technical Installation	2	60
TEIT 2250	Ethical Hacking	3	90

May 18, 2023
Adjusted October 31, 2024

TEIT 2350	CompTIA Project +	3	90
TEIT 2910	Special Projects I	1	30
TEIT 2920	Special Projects II	2	60
USU – Eastern (9 Credits/270 Clock-Hours)			
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 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 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

Utah System of Higher Education
Networking and Cybersecurity
FY2026 / 21 Credits (630 Clock-Hours)

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.

FOUNDATIONAL COURSE DESCRIPTIONS

Career and Workplace Relations — 1 Credit/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.

Introduction to Networking — 1 Credit/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.

Computer Networks I **2 Credits/60 Clock-Hours**

Computer Networks I explores common computer networking models, network device installation and configuration, switching and routing technologies, IP address configuration, basic wireless network configuration, and network troubleshooting tools and methodology. This course aligns with objectives from popular networking certifications.

Objectives:

- Differentiate the purpose of each layer in the Open Systems Interconnection (OSI) model.
- Install and configure common networking devices, components, and services.
- Identify characteristics of switching and routing technologies and features.
- Plan and configure IPv4 and IPv6 network addresses and services.
- Configure a small office/home office (SOHO) wireless network.
- Use the appropriate methodology, tools, and protocols to troubleshoot and resolve networking issues.

A+ Core I **3 Credits/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 Credits/90 Clock-Hours**

A+ Core II is a follow-up to A+ CoreI 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.

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 application installation and management.

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 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.

Computer Networks II **3 Credits/90 Clock-Hours**

Computer Networks II examines network design and architecture considerations, network documentation, change management, network monitoring methods and solutions, configuration management, network security hardening techniques, and basic datacenter, cloud, and virtual-network concepts. This course aligns with objectives from popular networking certifications.

Objectives:

- Compare and contrast networking appliances, applications, and functions.
- Identify the purpose of organizational processes and procedures.
- Use protocols, tools, and techniques to monitor network activity and troubleshoot performance and availability issues.
- Identify and implement network defense techniques, security features, and security solutions.
- Configure secure enterprise wireless networks.
- Identify basic datacenter, cloud, and virtual-networking concepts.
- Compare and contrast network access and management methods.

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.

SUPPLEMENTAL (ELECTIVE) COURSE DESCRIPTIONS

Davis

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.

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.

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.

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.

Introduction to Scripting **1 Credit/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 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 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.

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.

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.

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.

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.

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.

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.

Ogden-Weber

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.

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.

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 Cybersecurity **1 Credit/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 Scripting **1 Credit/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.

Server + **4 Credits/120 Clock-Hours**

This course will focus on server hardware and software installation and management, server administration, security and disaster recovery, and Troubleshooting. This course is built around hands-on labs to facilitate a complete learning experience in preparation to take the Server+ CompTIA Certification. Server concepts in all the major operating systems (Mac OS, Windows, and Linux) will be covered in this course.

Objectives:

- Build, maintain, troubleshoot, secure and support server hardware and software technologies, including virtualization.
- Identify environmental issues.
- Explain disaster recovery and general security procedures.
- Identify industry terminology and concepts.
- Discuss server roles and their interaction in a dynamic computing environment.

Windows Administration **4 Credits/120 Clock-Hours**

This course will improve upon the Windows Administration concepts covered in A+ and will expose students to higher levels of Windows Administration tools and functions. This course will explore Windows

in-depth administration concepts such as imaging, user settings and preferences, Windows security, Group Policy, registry settings, and general Windows troubleshooting.

Objectives:

- Install and configure Windows operating systems.
- Create and manage user accounts.
- Implement system recovery and file protection.
- Manage group policy settings.
- Perform remote management and troubleshooting.
- Explore system monitoring.

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.

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.

Intermediate Service Desk **2 Credits/90 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.

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.
- 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.

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.

UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Networking and Cybersecurity
FY2026 / 21 Credits (630 Clock-Hours)

Salt Lake

Introduction to Cybersecurity **1 Credit/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.

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.
- 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.

Snow

Orientation **1 Credit/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 Credits/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.

Cybersecurity Essentials **3 Credits/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

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.

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.

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.
- 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.

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.

Cisco CCNA Enterprise Networking, Security, and Automation (ENSA) **3 Credits/90 Clock-Hours**

he 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.

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.
- Demonstrate competency with Linux Administration Tools.

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.

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.
- 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

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.

Introduction to Scripting **1 Credit/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.
- 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.

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.

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.

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).

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.

USU - Eastern

Introduction to Programming **3 Credits/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.

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 Credits/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 Credits/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.
- 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.

Introduction to Scripting **1 Credit/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.

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.

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.
- 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

Utah System of Higher Education
Software Quality Assurance
FY2026 / 10 Credits (300 Clock-Hours)

Software Quality Assurance

Institutions: Mountainland

Technical Certificate (Catalog Year: 2026,10 Credits/300 Clock-Hours Required, CIP: 15.1204)

Foundational Courses (10 Credits/300 Clock-Hours)		Credits	Clock-Hours
TEAQ 1010	Introduction to Quality Assurance	3	90
TEAQ 1011	Databases and SQL Queries	1	30
TEAQ 1012	API Testing	2	60
TEAQ 1013	Automated Testing	4	120

November 3, 2023
Adjusted October 31, 2024

PROGRAM DESCRIPTION

The Software Quality Assurance program covers all aspects of software quality assurance, from manual testing to automated testing, API (Application Programming Interface) testing, and database management. The program is designed to provide students with a deep understanding of software quality assurance principles, techniques, and tools, and to equip them with the skills required to ensure the delivery of high-quality software products.

Objectives:

- Demonstrate software quality assurance principles and techniques and explain their role in ensuring the delivery of high-quality software products.
- Perform manual testing, automated testing, API testing, and database management.
- Describe the different types of software testing and how they are used to ensure software quality.
- Design, develop, and execute automated tests using industry-standard test automation frameworks and scripting languages.
- Explain principles of API testing, including load testing and endpoint testing, and develop skills in designing and executing these types of tests.
- Demonstrate testing, implementing, and managing databases, including data modeling, database normalization, indexing, data integrity, and data security.
- Demonstrate problem-solving and critical thinking skills by working on real-world software quality assurance projects.
- Present the importance of quality assurance in software development and its impact on business success.

FOUNDATIONAL COURSE DESCRIPTIONS

Introduction to Quality Assurance **3 Credits/90 Clock-Hours**

The Introduction to Quality Assurance course is designed to provide an overview of software quality assurance and its role in the software development process. The course will cover the fundamentals of manual QA, including test plan creation, test case design, and defect management. The course will introduce students to common tools used in software quality assurance, such as bug tracking systems, version control systems, and automated testing tools. By the end of the course, students have an understanding of software quality assurance principles and practices.

Objectives:

- Explain the role of QA in the software development process.
- Create effective test plans and test cases.
- Describe the different types of testing, including unit testing, integration testing, system testing, and acceptance testing.
- Collaborate using common software quality assurance tools, including bug tracking systems, version control systems, and automated testing tools.
- Summarize commonly used industry terms and practices.

Databases and SQL Queries **1 Credit/30 Clock-Hours**

The Databases and SQL Queries course aims to equip students with an understanding of database management systems and SQL (Structured Query Language). Students learn how to create, maintain

and manipulate databases, as well as how to write SQL queries to extract, modify and analyze data. The course covers a range of topics including data modeling, database normalization, indexing, data integrity, and data security.

Objectives:

- Explain the concepts and principles of database management systems.
- Discuss the fundamentals of relational database design and normalization to build efficient and scalable databases.
- Execute SQL queries to extract and manipulate data from databases.
- Optimize database performance through indexing and other techniques.
- Ensure data integrity and security through the use of constraints and other measures.
- Troubleshoot and debug common issues in database management and SQL queries.

API Testing **2 Credits/60 Clock-Hours**

The API Testing course focuses on testing the performance and functionality of software applications. Students learn how to evaluate the speed, scalability, stability, and reliability of software systems, as well as how to test their API endpoints. The course covers a range of topics including load testing, stress testing, spike testing, and endurance testing, as well as API testing tools and techniques.

Objectives:

- Articulate the importance of performance and API testing in software development and quality assurance.
- Analyze and interpret performance test results and identify performance bottlenecks in software applications.
- Explain API testing concepts, such as endpoints, request/response types, and authentication methods.
- Design and execute API tests using industry standard testing frameworks.
- Evaluate the quality of API endpoints, including status codes, and error handling.

Automated Testing **4 Credits/120 Clock-Hours**

The Automated Testing course focuses on the development and implementation of automated testing strategies and tools for software applications. Students learn how to design, develop and execute automated tests for software applications, including unit tests, integration tests, and end-to-end tests. The course covers a range of topics, including test automation frameworks, scripting languages, continuous integration, and best practices in automated testing.

Objectives:

- Describe the importance of automated testing in software development and quality assurance.
- Explain different types of automated tests, including unit tests, integration tests, and end-to-end tests.
- Design and develop automated tests using industry-standard test automation frameworks.
- Set up and integrate automated tests into a continuous integration (CI) pipeline using industry standard tools.
- Write maintainable and scalable test automation code using best practices and design patterns.