

CTEC

Start college with us!



2022-2023

Course Catalog

- Real-World Experience
- Industry Certifications
- Concurrent Enrollment



SCAN ME

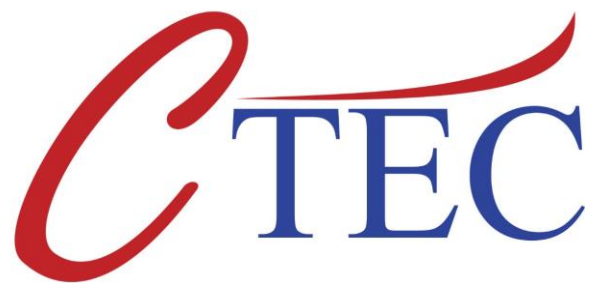


@CTECnow



CANYONS
SCHOOL DISTRICT

ctec.canyonsdistrict.org



MISSION STATEMENT

THE MISSION OF CANYONS TECHNICAL
EDUCATION CENTER IS TO PROVIDE
ALL STUDENTS AN INNOVATIVE
EDUCATION THROUGH COMPETENCY-
BASED INSTRUCTION THAT PRODUCES
PRODUCTIVE, RESPONSIBLE, ENGAGED,
PROFESSIONAL, SUCCESSFUL
STUDENTS WHO POSSESS THE TOOLS
NECESSARY TO BE SUCCESSFUL IN
POST-SECONDARY EDUCATION OR
CAREER SETTINGS.

Dear Students and Parents,

On behalf of the faculty and staff, I welcome you to investigate the educational opportunities that await you here at CTEC. I speak with students daily who tell me this is their favorite part of the school day. The reasons are numerous, but let me tell you a few of the most common:

- **Building a Solid Foundation** –At CTEC, our goal is to build a solid foundation for your career and college plans and then you will determine your path from then on. We help you build a solid foundation consisting of technical skills, people skills, and a vision for what you can do with your future work experience, added college and workplace training, and your own desires to find success.
- **Useful Now** - What students learn here, they are using now; the education applies to the work they want to do, or they are actually doing now.
- **Chosen Career** - Students have the opportunity to learn, work, and/or intern in their chosen career field. CNA and Medical Assisting students will intern with hospitals and care facilities. Cosmetology students will cut, curl, and color clients' hair. Emergency Medical Technician students will have the opportunity to do a ride along with Sandy Fire. These opportunities are available for students who are learning and doing their best.
- **College Credit** - Students can earn college credit now as juniors and seniors. The cost is minimal and the return in credit and educational self-confidence is rewarding. College classes can be applied toward College Certificates, Associate Degrees, or Bachelor Degrees. CTEC partners with Salt Lake Community College, Utah Valley University, as well as Utah State University – Eastern to offer college credit.
- **Industry Certifications** - In addition to college credit, many of our programs offer industry certifications. Employers love to see candidates with proven and tested training on their resumes. Many of the programs offer industry certifications including Adobe, and ASE certificates. Check the catalog or website to see what college credits and industry certifications your area of interest offers.
- **Friends** - Students enjoy the opportunity to build friendships with students who have similar career and educational goals. Many lasting friendships have been created while working in the classroom with fellow students from other high schools as well as during internship opportunities.
- **Varied Learning Opportunities** - Learning happens in the classrooms, shops, labs, field trips and during career days. Depending on the student's chosen program, students will participate in skills courses, as well as emergency and medical training. Doors are opened to CTEC students allowing them to interact with current industry professionals and leaders in the different program areas.
- **Transportation** - Bussing is provided from all high schools in the Canyons School District. Many students choose to carpool, and at CTEC, there is a required parking sticker available. Please be safe if you choose to drive.

I hope you take the time to research programs, visit us here at CTEC, talk to our teachers or CTE Coordinator, and see if we have the right program for your future. You will have the opportunity to learn from industry professionals who have trained to become excellent teachers. At CTEC, students start with a high school course, but move with confidence toward a chosen career and college pathway. We look forward to having you at CTEC.

Doug Hallenbeck

Principal

Canyons Technical Education Center



CANYONS SCHOOL DISTRICT

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DISTRICT ADMINISTRATION

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Assistant Superintendent: Dr. Robert Dowdle

CANYONS TECHNICAL EDUCATION CENTER

Doug Hallenbeck, Principal
Emalee Brown, CTE Coordinator

CANYONS DISTRICT CAREER AND TECHNICAL EDUCATION

Janet Goble, CTE Director
Patricia Larkin, CTE District Coordinator

No District employee or student shall be subjected to discrimination in employment or any District program or activity on the basis of age, color, disability, gender, gender identity, national origin, pregnancy, race, religion, sexual orientation, or veteran status. Canyons School District is committed to providing equal access and equal opportunity in its programs, services and employment including its policies, complaint processes, program accessibility, District facility use, accommodations and other Equal Employment Opportunity matters. The following person has been designated to handle inquiries and complaints regarding unlawful discrimination, harassment, and retaliation, Daniel Harper, General Counsel Officer 801-826-5062

Published December 2021



GENERAL INFORMATION

Canyons Technical Education Center



825 East 9085 South
Sandy, Utah 84094

ctec.canyonsdistrict.org

Phone : 801-826-6600

Fax: 801-826-6609

2022-2023 Registration opens:

January 7, 2022 at 7:00 am

REGISTRATION PROCEDURES

- STEP 1 Read the catalog or check out course information at ctec.canyonsdistrict.org. Select a program. Most courses are available to Junior and Senior students only. Any student enrolled at CTEC must also be registered at a Canyons School District or Wasatch Front Region affiliated high school. Charter school/home school students call Emalee Brown 801-826-6621 for registration information.
- STEP 2 Evaluate your schedule, graduation status, time restrictions, and career goals with your CTE Coordinator and/or counselor at your school. Review the course requirements and take the steps necessary to meet those requirements.
- STEP 3 **Canyons School District** students, as well as **Jordan, Murray** and other **Wasatch Front South Region District** students will need to begin the registration process by completing the 2022-2023 Application Form at ctec.canyonsdistrict.org (Click on the **Apply Here** tab). After you have filled out the requested information completely, click the **Submit** button.
- STEP 4 Beginning January 7, 2022, students will apply online in the program of their choice. All students will receive an email with additional information. Similar to college enrollment, this is a first-come, first-serve enrollment process. If a program has filled, you have the option of selecting an alternative time, an alternative program, or being placed on a waiting list. Later you will complete your boundary school scheduling.

For questions regarding registration, please call Carla Matagi, CTEC Registrar, 801-826-6610

Canyons District CTE Coordinators		
Alta High School	Brandon Jacobson	801-826-5641
Brighton High School	Lisa Prudden	801-826-5841
Corner Canyon High School	Ben Poulsen	801-826-6441
Hillcrest High School	Kevin Wood	801-826-6041
Jordan High School	Karma Bateman	801-826-6241
Other CTE Contacts		
Granite School District	Ben Anderson	385-646-7039
Murray School District	Chantel Olsen	801-264-7460 Ext. 5182
JATC North	Mandi Jensen	801-256-5905
JATC South	Tami Clevenger	801-412-1305
Salt Lake School District	Anne Martin	801-584-2900

BUSINESS LEADERSHIP/PROJECT MANAGEMENT

Semester

Business



Instructor: Kim Simpson-Batey

kimberly.simpson@canyonsdistrict.org

801-826-6632

PROGRAM DESCRIPTION: This program focuses on business leadership, internship and project management. This program integrates project management into its focus. CTEC collaborates with local businesses and community leaders to provide students with a unique, immersive experience resulting in highly skilled, adaptable innovators and leaders. Students will work on understanding business roles and the attributes of a business leader. Students will also be coached in project management, taking on actual business issues and helping businesses reach innovative solutions and answers. Students will gain valuable team working experience, professional growth and real-world opportunities.



High School Credit: CTE credit or elective credit: Up to 2 credits total.

Concurrent Enrollment: Up to 6 college credits possible. Student is responsible to register and pay for concurrent enrollment classes at SLCC. For more information on these classes, see Appendix.

Industry Certifications: ESB (Entrepreneurship Small Business) industry certifications TBD

Skills Certifications: Utah State Skills Certificate Tests

COURSE DESCRIPTIONS:

Business–Marketing Capstone: The purpose of this course is to research and solve real world business needs. This course is designed for advanced business students to further their business knowledge and skills. It encourages students to think analytically, logically and creatively to integrate experience and knowledge in real world situations. In this program this is done in collaboration with local businesses with real projects and outcomes measured by our business partners.

BUS 1010 Introduction to Business: Earn college credit in a business course which will expose students to the diverse world of business, revealing how each of us is connected to business personally, professionally, and how business connects us culturally and socially. Students will learn how individuals function within a specific field and how various disciplines work together in cross functional teams. Students will work as an employee in a professional business environment; gain management experience; build a portfolio of state and national certifications.

ECON 1010 Economics for Social Sciences: Earn college credit while studying the production, distribution and consumption of goods and services; and how society uses limited resources. Students will gain an awareness of the role of economics in social problems and business interactions and decisions. This class is designed as a general information course for all individuals despite major, and satisfies the social science component of general education.

CTE Internship: Related Work-Based Learning provides on the job training opportunities that are directly related to a career goal and course of study identified through the CCR. Therefore, a student must have taken or currently be enrolled in a CTE class related to the internship opportunity. This Work-Based Learning experience is designed to bridge the gap between school and work. Appropriate supervision by a school / district coordinator must be maintained.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Entrepreneur
Business Management
Department Manager
Human Resource Management
Management Analyst
Corporate Manager

Financial Services and/or management
Meetings, Convention and Event Planner
Certified Public Speaker
TV/Radio Broadcasting
Project Management
Marketing and/or Social Media Specialist



"The business leadership program at the Canyons Technical Education Center is the absolute best class that I have ever taken. This class is nothing like normal high school, the minute you walk in the doors you enter a professional environment and are treated like a professional employee in a company. This may seem intimidating but it is one of the most empowering programs that you could ever be enrolled in. This class not only offers a more mature environment but it also offers the ability to obtain college credits at an amazing price, attendance and completion of multiple professional seminars, the ability to obtain certificates of competency and lastly offers the ability to make the paradigm shift from a student to a professional employee earlier in life than many others". Abbie Stojack



CONSTRUCTION MANAGEMENT *Full Year*

Skilled and Technical Sciences



Instructor: Nathan Hampton

nathan.hampton@canyonsdistrict.org

801-826-6668

PROGRAM DESCRIPTION: Students will participate in managing all phases of constructing a home: blueprint reading, estimating proposal, hiring subcontractors, permits application, ordering supplies, math skills, layout work, surveying, zoning requirements, safety procedures, footing and foundation, concrete flatwork, framing, plumbing, electrical, HVAC, finish carpentry, sheetrock, roof coverings, installing windows, installing exterior doors, tile floors, hardwood floors, painting, carpet, hardware. All skills will require proper use of tools involved to complete each process. Students will work with engineers, building officials and licensed trades design consultants. Students will have the opportunity to be involved with SkillsUSA student organization which will help students excel by competing against other students. Students may choose to receive concurrent enrollment credit at SLCC.



High School Credit: CTE credit or elective credit: Up to 4 credits

Concurrent Enrollment: Up to 10 college credits. Student is responsible to register and pay for concurrent enrollment classes at SLCC. For more information on these classes, see Appendix.

Skills Certification: Utah State Skills Certificate Test

Additional Opportunities: Students may experience youth leadership and service through SkillsUSA.

Requirements: Physical ability to be able to lift at least 30 lbs. Ability to understand and follow safety procedures. Be able to use power and pneumatic tools safely. Drawing and design skills would be helpful.

Recommended: Woodworking

COURSE DESCRIPTIONS:

CMGT 1410 Materials and Methods: Learn how to manage construction sites, materials, sub-contractors and develop essential skills. Students take an active role in research, green build and smart home techniques.

Construction Trades Foundation: A course that generally prepares individuals in the following areas: basic safety, introduction to blueprint reading, introduction to power tools, introduction to hand tools, and introduction to construction math. It also includes an industry overview, what to expect on the job and specific career opportunities.

CMGT 1320 Building Construction 1/Carpentry 1: Students will learn the concepts of footings, foundations and flat work. Green build and traditional techniques will be taught. Students will lay out and construct floors, exterior and interior walls, be introduced to metal stud framing, and hang exterior doors and windows. Students will learn how to install, tape, and mud drywall. Sophisticated methods used to maintain a tight building envelope will be used. Stair and roof construction will be introduced.

CMGT 1330 Interiors Finishes/Carpentry 2: This course covers materials and selection that support the responsible use of natural resources. Subjects include hanging doors, installing base, casing, stair treads, skirts, and closet organizers. Installation of hardwood floors, handrails and stair caps will be taught. Students will also be introduced to the basics of installing tile floors and shower walls. Students will be taught how to install doorknobs and residential hardware.

Carpentry 2: An advanced carpentry program with a sequence of courses that prepares individuals to layout, fabricate, erect, install, and repair wooden structures and fixtures using hand and power tools. Includes advanced instruction in common systems of framing, construction materials, estimating, blueprint reading, concrete placing, siding, and mechanical systems. These courses are based on the current National Center for Construction Education and Research (NCCER) task list.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Construction
Rough Carpenter
Finish Carpenter
Roofer
Drywall Installer and Finisher
Civil Engineer
Structural Engineer
Soil Engineer

General Contractor
Remodeling Contractor
Siding Installer
Cement Finisher
Construction Management
Superintendent Project Manager
Architect
Draftsman



I really liked the plumbing unit and learning how to solder pipes together. I also enjoyed framing and learning all the different techniques that are used. Learning to do electrical was fun. We learned which wire goes where, how to strip the wires, and how to connect them. This class was great! Larissa Hanley 2021

As a student of the CTEC Construction management program, I was introduced to many new concepts and details about the construction process and industry that I had never considered a possibility before. Some especially interesting construction processes we delved into were masonry, drywall and framing. These parts of the class were fun to learn about and to practice our skills. The program also taps into the specifics of the construction industry where we look at how to manage out time, take bids from different contractors to compare with one another, and consult with the instructor on estimates for our real world projects. We also learn how to construct specific plans and blueprints. Anonymous, 2021

The CTEC Construction Management program has been so fun and very eye opening. Every day I came to class, I learned something new. While taking this class, I feel we have learned aspects of every area in house building. I have learned countless life skills. Brayden Ellis, 2021



COSMETOLOGY/BARBERING *Full Year*

Skilled and Technical Sciences



Instructor: Shelli Ivie	shelli.ivie@canyonsdistrict.org	801-826-6661
Assistant: Lorrie Engstrom	lorrie.engstrom@canyonsdistrict.org	801-826-6662
Instructor: Matt Shaw	matt.shaw@canyonsdistrict.org	801-826-6665
Instructor: Eliza Seeley	eliza.seeley@canyonsdistrict.org	801-826-6664

CTEC Cosmetology/Barber is the only high school cosmetology program in Utah where a student can earn a professional cosmetology/barber license at the time of their high school graduation. *

- *The student who attends the program for **2 years** including summer sessions has the ability to complete the state licensing requirements to be a licensed cosmetologist/barber.
- The student who attends the program for **1 year** is able to transfer their clock hours and services to a Cosmetology/Barber program of their choice after high school graduation.
- By successfully completing the **2 year** course sequence, students will have the opportunity to earn up to 44 elective college credits.
- Those seeking a Cosmetology Degree may attend the USU-Eastern campus to fulfill the USU-Eastern cosmetology/barber course curriculum.
- Upon the student's completion of the state license requirements, the student will be able to apply for a cosmetology/barber license.

PROGRAM DESCRIPTION: Cosmetology is the art and science of beautifying and improving the hair, skin and nails. The students earn required hours and prepare to pass both the Utah Written and Practical Examinations required to obtain a Utah DOPL Cosmetology/Barber License. Students receive this preparation while practicing in an actual salon experience through the program's public salon facilities and its clientele. Students are also prepared in theory classes. Students have the opportunity to study and practice hair styling, cutting, coloring, perming, chemical relaxing, nail care, skin care, chemistry, anatomy, and physiology - all with an emphasis on safety, sanitation and professionalism. Students will be expected to take on the role of a cosmetologist and client during this program.

PROGRAM DESCRIPTION: See Concurrent Enrollment Appendix.



Additional Classes Available: To provide the student with the opportunity to earn additional clock hours, the student has the option after their first semester to attend 2 evening sessions a week in addition to the school day session. A summer session is also available to the students to earn additional clock hours.

High School Credit: CTE credit or elective credit: up to 4.5 credits total each year

Concurrent Credit: 44 elective college credits available. Student is required to register and pay for concurrent enrollment classes with USU-Eastern. For more information on these classes, see Appendix.

Additional Opportunities: Students may experience youth leadership and service through SkillsUSA.

Industry Certification: Students will work toward the State of Utah DOPL: Utah Cosmetology/Barbering Licensing Exams.

Recommended: Good eye-hand coordination, artistic color and design principles, basic geometric design, logical reasoning, basic math, and customer service skills.

Requirements: **Contact your CTE Coordinator before December for priority deadline dates.** A parent is required to attend the orientation meeting.

A 2.0 GPA is required by USU-Eastern.

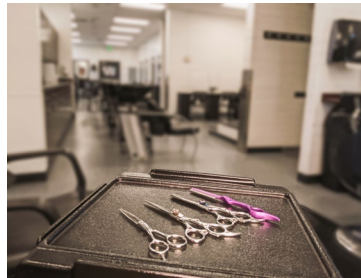
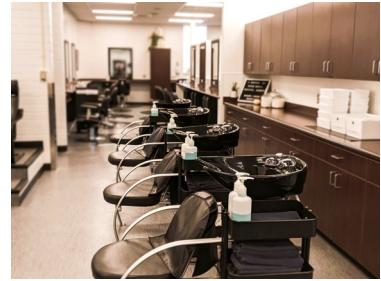
Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Licensed Cosmetologist/Barber
Hair Stylist
Nail Technician

Basic Esthetician (skin care)
Make-up Artist
Salon Manager

Salon owner
Platform Artist
Professional Educator



"I've been passionate about becoming a Cosmetologist since age 3. With careful planning, 2 summers, 2 school years, and night classes, I graduated high school as a Licensed Cosmetologist and Barber. I saved time and money by taking advantage of the concurrent classes offered at CTEC during high school. CTEC provided me with amazing instructors that helped me hone my talents, leadership, and business skills. At the same time, they supported my goal of giving community service to better the lives of others. CTEC wants everyone in the program to thrive, not just survive. At age 18, I'm a Cosmetologist, enjoying my career, and will graduate from USU-E this Dec with my Applied Associate of Science Cosmetology Degree. After that I will advance towards a Business Degree". Stephanie Jencks



CRIMINAL JUSTICE *Semester*

Skilled and Technical Sciences



Instructor: Edwin Lehauli

edwin.lehauli@canyonsdistrict.org

801-826-6648

PROGRAM DESCRIPTION: The Criminal Justice course is designed to prepare students for an exciting career in the field of law or law enforcement. Students will learn about many diverse job opportunities that are available such as patrol officer, SWAT team member, detective, K9 officer and other disciplines such as careers in federal agencies like the FBI, Secret Service and ATF (Bureau of Alcohol, Tobacco, Firearms and Explosives). Students will have the opportunity to meet professionals in the field and participate in simulated scenarios, demonstrations and tour pertinent law enforcement sites.



High School Credit: CTE credit or elective credit: up to 2 credits total
Concurrent Enrollment: 12 college credits required. Student is responsible to register and pay for concurrent enrollment classes at SLCC. For more information on these classes, see Appendix.
Skills Certification: Utah State Skill Certification Test
Additional Opportunities: SkillsUSA membership

COURSE DESCRIPTIONS:

CJ 1330 Criminal Law: Students will gain an understanding of criminal law and punishments, the constitution, individual rights and general principles of criminal liability. They will also learn about crimes against persons and crimes against property. The students will also participate in various debates involving our current laws and regulations.

CJ 2540 Careers in Law Enforcement: The students will become familiar with the various careers in law enforcement. They will learn the steps involved to become a police officer or a federal officer. They will participate in an oral board interview and the police physical fitness test. They will be given instruction on officer safety issues and will also learn how to build a professional resume.

CJ 1010 Introduction to Criminal Justice: Exposes students to theories, concepts, and methods used to facilitate understanding, predicating and responding to issues of deviance and crime in America. Also includes development and evolution of components of American Criminal Justice System, including the history of racial, ethnic and gender discrimination on charging, conviction, incarceration and employment.

CJ 1300 Introduction to Corrections: Introduces the corrections system. Includes origin and evolution, philosophies of corrections, perspectives on sentencing, and alternatives to incarceration. Includes community corrections, probation and parole, offender rights and legal issues; adult, juvenile, and special needs offenders; corrections specialists, staff and administration as a profession and special challenges for the future.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Police Officer
Probation and Parole Officer
Corrections Officer
Military Police Officer

Private Security
Criminal Investigators and Special Agents
Criminal Justice and Law Enforcement Teachers



"This class expands your knowledge on Law Enforcement and many things you didn't know before. I highly recommend this class to anyone who's looking into Law Enforcement as a career. It provides a challenge for anyone who's up for it". Nazhelly

"This class has taught me much more about law Enforcement. It makes you respect the job and gives you a better feel for Law Enforcement". Jason

"This is a very interesting and fun class! I've learned a lot and it's been fun". Maddie

"This class has been a truly amazing experience and opportunity and I love every minute of it". Dallas

"I would highly recommend this class to anyone who wants to experience a challenging and fun class!" Ethan

"This class is great"! Carson



DIGITAL MEDIA, 3D, GAME DEVELOPMENT *Full Year*

Information Technology Education



Instructor: Jennifer Tighe

jennifer.tighe@canyonsdistrict.org

801-826-6654

PROGRAM DESCRIPTION: This Digital Media program prepares students for the 21st Century workforce demands through hands-on training with the industry's leading software and equipment. Our innovative students collaborate through project based learning to gain skills for careers such as graphic design, digital illustration, photography, audio production, 2D and 3D animation, web design, film production, story development, game design, app development, and more! The foundational courses of this program will prepare students to successfully create all the necessary assets required within their later game development courses, as well as build upon their communication, time management, problem solving, and teamwork skills. By the end of year, students will have a comprehensive portfolio tailored to their skills demonstrating a wide variety of both printed and interactive digital media projects.



High School Credit: CTE credit or elective credit: up to 4 credits total
Concurrent Enrollment: 4 College Credits. AP Studio Art Credit optional.
Student is responsible to register and pay for concurrent enrollment classes at SLCC. For more information on these classes, see Appendix.

Industry Certifications: Adobe ACA for Photoshop, Illustrator, Animate, Premiere Pro, InDesign, and Dreamweaver.

Skills Certifications: Utah State Skills Certificate Tests

Additional Opportunities: SkillsUSA membership

Recommended: Computer skills, computer graphics, and art classes

COURSE DESCRIPTIONS:

ART 1080 Photoshop and Digital Media: The Concurrent Enrollment (CE) course focus will be on using Adobe software as a tool to produce CG imagery for video production, photo illustration, digital publishing and animation. Adobe Photoshop, Illustrator, Animate, Premiere, and Autodesk software will be introduced.

3D Graphics: Students will use 3D graphics software to produce 3D models. This course will introduce students to 2D and 3D modeling, the creation and application of textures, mapping, lighting, camera techniques, and rendering of 3D models.

3D Animation: Use 3D graphics software to produce 3D animations. Introduce students to 2D and 3D, animation planning, storyboard development, and the animation process.

Game Development Fundamentals 1: This course is designed to provide students with knowledge and project based experience of fundamental game development concepts relating to STEM. These concepts include game design, scripting, creation of digital assets, graphic resources, animations, understanding hardware, problem solving, critical thinking, collaboration, and project management.

Game Development Fundamentals 2: Following Game Development Fundamentals 1, this second course will allow for a deeper application of the skills learned as students work together to produce original games.

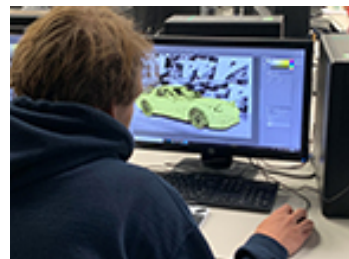
Digital Media 2: Gain a deeper knowledge of concepts such as graphics, animation, audio and video production and create a professional level portfolio. Work toward the Adobe ACA software industry certifications on Photoshop, Illustrator, Animate, and Premiere Pro. Learn to create animation, video and audio projects using digital media applications. Animation principles, script writing, storyboarding, and project management techniques are used to help students in the production process.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Graphic Designer
Digital Illustrator
Audio Engineer
Video Specialist
Industrial Designer
Concept/Storyboard Artist
3D Modeler/Texturer

Instructional Designer
Game Designer
2D or 3D Animator
Digital Photographer
Art Director



"CTEC was a wonderful experience. It allowed me to explore different career paths without wasting time and money. CTEC teaches with professional technology and I learned so much about what will be needed in the working world. In fact, so much so, that I was able to get a job in a related field soon after graduation and am far ahead of the other kids in my college classes. I recommend CTEC to anyone interested in exploring the various career paths offered and want to have fun along the way". Ashlyn Cary

"I love CTEC because it had a class focusing on my future career goals. My home high school didn't have an in-depth animation class. I am able to learn what I love! I also get to make new friends from other schools I wouldn't have been able to meet normally. I have been able to make new friends for life. I have greatly enjoyed my two years at CTEC, and I would suggest to anyone with big dreams to come here and experience it for yourself"! Kaitlyn Brockbank



EMERGENCY MEDICAL TECHNICIAN *Semester*

(EMT) Health Sciences



Instructor: Tori Penrod

tori.penrod@canyonsdistrict.org

801-826-6657

PROGRAM DESCRIPTION: This EMT course provides students with insights into the theory and application of concepts related to the profession of emergency medical services. Specific topics include EMS preparatory, airway management, patient assessment, management of trauma patients, management of medical patients, treating infants and children, and various EMS operations. The course is based on the NHTSA Emergency Services Education Standards, National Registry of EMT's, and ATTA Guidelines. It is highly recommended that students in this program have at least a 2.0 GPA due to the rigorous academic requirements.



High School Credit: CTE credit or elective credit: 2 credits total

Concurrent Enrollment: Through SLCC 6 college credits are required for this program. For more information on these classes, see Appendix.

Industry Certification: Students will prepare to take the NREMT Psychomotor and Cognitive Exams, NRE MT Certification and Utah license

Additional Opportunities: HOSA membership

Requirements: Must be a senior to attend this class. It is strongly recommended that students have current immunizations including the hepatitis A and B series and current TB. Students must provide their own transportation to all clinical sessions. Students must be able to drag 125 pounds, and lift 50 pounds.

HIGHLY Recommended: Biology, Medical Anatomy and Physiology, Medical Terminology

COURSE DESCRIPTIONS:

HSEM 2300/Emergency Medical Technician 1 and 2: Our exciting, yet demanding course will be taught through didactic lecture, hands on demonstration and practical application settings. Reading assignments and bookwork will be part of this program. The EMT candidate must maintain 80% on every assignment and test or better in order to take all required exams. Candidates who successfully complete the written exam and prove competency will then be recommended to take the NREMT psychomotor skills testing. Candidates who successfully complete the National Registry practical (psychomotor) skills stations and have successfully completed both testing phases will be required to schedule for the National Registry of EMT's (NREMT) written exam through Pearson Vue testing center. Candidates will need to be competent in their skills and knowledge and will be evaluated throughout the program. As we spend time in discussions, class lectures and implementing those tools through practice, the students will become knowledgeable, confident and competent. These techniques will help the student prepare for the National Registry of Emergency Medical Technician (NREMT) exams. Upon recommendation and successful completion of all requirements, students become eligible to be licensed as an Emergency Medical Technician through the State of Utah and NREMT. The NREMT Certification is renewed every 2 years and the Utah Bureau of EMS Licensure is renewed every 2 years.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Firefighter
Ski Patrol
Pre-Med
Pre-Nursing
EMT
Advanced EMT

Paramedic
Emergency Room Technician
Critical Care Technician
Military
Foreign Aid Medical
Humanitarian Expeditions

EMT Instructor
Phlebotomist
Flight Paramedic
Physician Assistant
Police Detective



"I had a great experience taking the EMT-basic course through CTEC. I was able to earn my EMT-Basic certificate in high school which got me ahead of the game and saved me a lot of money. I enjoyed being able to leave my regular high school every day and meet in a classroom where I could learn and practice skills that I knew could apply to my future. The skills I learned and exposure I received from CTEC helped start me on my career path. I am currently working in emergency services as a Paramedic and it all began with CTEC! I competed and won the CPR competition for SkillsUSA a few years ago and worked for Sandy City Fire Department as a member of Sandy Fire's Medic Corp program. I am currently working as a Gold Cross paramedic in St George". Laura Berbert

"The EMT program at CTEC is a great program to attend. The instructors know what they are talking about and are willing to help with any questions I had or skills I was struggling with. The program has prepared me for the jobs I currently hold as a part time firefighter/EMT for South Salt Lake Fire and Unified Fire Authority. I wouldn't be where I am at today without the CTEC EMT program". Austin Rekoutis



FOUNDATIONS OF CYBERSECURITY *Full Year*

Information Technology Education



Instructor: Ben Crenshaw

ben.crenshaw@canyonsdistrict.org

801-826-6653

PROGRAM DESCRIPTION: One of the fastest growing job sectors in the U.S. is cybersecurity. According to multiple media outlets, a projected 3.5 million vacancies are expected in 2021, which is a 350% growth since 2013. Opportunities within the field of cybersecurity are endless. All this industry needs are skilled and talented individuals. To meet their ever-evolving demands, companies are hiring students to fill these vacancies as more cybersecurity threats are recognized every day. Providing cybersecurity pathways at an earlier age is imperative for the industry, as it will enable you to achieve success in your personal and professional life. This multi-faceted course will bring students to the forefront of cyber technologies through daily Cyber Briefings, team activities, CTF competitions, and hands-on labs using a fully functional Cyber Range



High School Credit: CTE credit or elective credit: up to 4 credits

Industry Certifications: TestOut Pro Certifications

Skills Certification: Utah CTE Skill Certificates

Additional Opportunities: [National Cyber League](#), [CompTIA's Academic Partner Program](#), [CyberStart America](#), [PicoCTF](#)

Recommended: Keyboarding and Foundations of Technology

COURSE DESCRIPTIONS:

Computer Systems 1: Students will learn necessary competencies for an entry-level IT professional including installing, building, upgrading, repairing, configuring, troubleshooting, optimizing, diagnosing, and performing preventive maintenance of basic personal computer hardware.

Computer Systems 2: Students will expand on the skill gained in [Computer Systems 1](#). They discover and install common operating systems and their purposes. This course will introduce the importance of computer security including physical and cybersecurity measures. This course also focuses on software troubleshooting and operational procedures.

Principles of Cyber Defense and Ethics: In this course students will discover the importance of cybersecurity in information technology. The objective is to understand cyber-attacks and the techniques used to take control of an unsecure system. Students will learn how to use features of modern operating systems to enhance an organization's security, understand inherent weaknesses in wireless and wired networks, and be better equipped to protect your employer's and your own information.

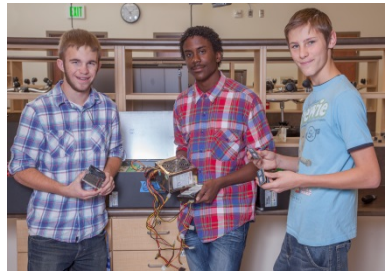
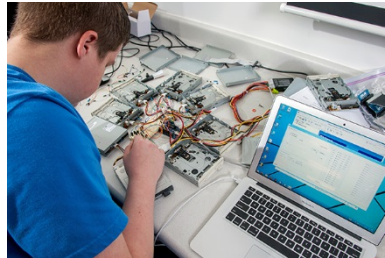
Network Fundamentals: Students will gain knowledge and skills required to implement a defined network architecture with basic network security. Furthermore, they will be able to configure, maintain, and troubleshoot network devices using appropriate network tools and understand the features and purpose of network technologies.

Cyber Forensics: This course will cover the fundamentals of computer forensics and investigations. Students will understand topics including historical and current computer forensic and investigative security issues, a systematic approach to computer investigations and cyber forensics tools. They will learn email, image, and file analysis including guidelines for investigation reporting. Various forensic tools will be used during the hands-on labs.

Costs/Fees for the 2022-2023 school year: *Pending school board approval.*

Career Possibilities:

Computer Forensics Analyst	Cryptanalysts	Service Desk Analyst
Security Administrator	Malware Analyst	Security Auditor
Cybercrime Investigator	Security Architect	Data Protection Officer
Security Incident Responder	Network Administrator	Wireless Network Engineer



*I have personally enjoyed learning and doing the ethical hacking labs in this program. I feel the labs give the most hands-on experience and I am more of a hands-on type of person. The TestOut certification modules are enjoyable and informative. I have earned several industry certifications already. Having the resources to do my own personal computer projects in class is nice and lets me learn more in class than what is in the syllabus. **James Farnsworth, 2021***

*My favorite lab in this program was building a computer. Even though I had a PC at home, I was not the one who put it together. My knowledge on computers only went as far as knowing the RAM existed. The program is fun and easy going while being very useful. The teacher has helped me study for the CompTIA Network+ exam, even though it is not in the program curriculum. So far, I have earned six certifications with my favorite ones being the TestOut exams because it emulates a real workplace. **Miriya Rossiter, 2021***

*I was able to participate in the cybersecurity program at CTEC and I enjoyed myself immensely. Mr. Crenshaw is a fantastic teacher who applies what we learn in class to real world events. Every morning we talk about an event or technology that recently happened or that was released, so everything we learn is always relevant. We have done lots of labs and hands on experiments and whenever we want to try something Mr. Crenshaw just asks us what we need him to do in order to accomplish the task. I would recommend this class to any and all students who want to learn more about cybersecurity. **Coleman Hone, 2021***

*I have liked learning about security breaches from our daily Cybersecurity Briefings. My favorite labs have been using Metasploit, a pen-testing framework, to execute basic attacks—it is a tool I wouldn't otherwise have learned how to use. I had the most fun learning about networking hands-on with Cisco routers and switches. I would recommend this class as a great way to get hands-on experience and general knowledge about computers, networking, and cybersecurity! As part of the class, I also earned several IT certifications to get me started in the industry. **Kyle Holland, 2021***



HEAVY DUTY MECHANICS/DIESEL *Full Year*

Skilled and Technical Sciences

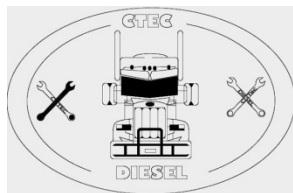


Instructor: Blaine Johansen

blaine.johansen@canyonsdistrict.org

801-826-6637

PROGRAM DESCRIPTION: Topics include learning tools for measuring internal and external diesel engine components, complete engine rebuild, 12/24 volt electrical systems, Ohms law in incorporating math into the electrical systems, voltage drop, resistance, wiring, trouble shooting and fuel systems. Students will learn to use power tools and hand tools safely. Students will learn about brakes and air brake systems, arc welding and gas torch use, suspensions on trailers, truck and wheel alignments, transmission, clutch repair, truck preventive maintenance, and differential removal/rebuild. Reading and understanding shop manuals will also be covered. Students will have internship and career opportunities.



High School Credit: CTE credit or elective credit: Up to 4 credits

Concurrent Enrollment: 8 college credits available. Student is responsible to register and pay for concurrent enrollment classes at SLCC. For more information on these classes, see Appendix.

Industry Certifications: ASE Diesel Brakes, ASE Engines, ASE Electrical/Electronic Systems, ASE Suspension/Steering

Additional Opportunities: Students may experience youth leadership and service through SkillsUSA.

Recommended: Automotive classes and mechanical experience

COURSE DESCRIPTIONS:

ASE Diesel IMMR: This course is the first in a group that prepares individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. Instruction covers training in the following areas of inspection, maintenance, and minor repair: safety, diesel engine mechanics, drive trains, and electrical/electronic systems. Work ethics and productivity are an integral part of the classroom and lab activities of these courses.

ASE Diesel Brakes: This course is a follow up course to the Diesel IMMR and is in a sequence that prepares individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. Instruction covers training in the following areas: safety, diesel engine mechanics, drive trains, and electrical/electronic systems. Work ethics and productivity are an integral part of the classroom and lab activities of these courses.

ASE Diesel Electrical Systems: This course is a follow up course to the Diesel IMMR and is in a sequence that prepares individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. Instruction covers training in the following areas: safety and electrical/electronic systems. Work ethics and productivity are an integral part of the classroom and lab activities of these courses.

ASE Diesel Engine: This course is a follow up course to the Diesel IMMR and is in a sequence that prepares individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. Instruction covers training in the following areas: diesel engine repair. Work ethics and productivity are an integral part of the classroom and lab activities of these courses.

ASE Diesel Steering and Suspension: This course is a follow up to the Diesel IMMR course in a sequence that prepares individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. Instruction covers training in the following areas: safety and steering & suspension systems. Work ethics and productivity are an integral part of the classroom and lab activities of these courses.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Diesel Mechanic
Tool Sales
Truck Driver
Machining

Dealership Management and Sales
Welder
Fleet Maintenance and Management



"I loved learning about all the trucks. We made lots of fun friends and got to try lots of new things."
Carter North, 2021

"I really enjoyed all the projects we had this year and the freedom of starting new projects."
Logan Arnoldus, 2021

"It was so cool having the opportunity to learn about the semi-trucks and the heavy diesel industry. Being in this class has exposed us to all aspects of the diesel truck and has given me a good baseline knowledge to progress my career. Through this program, we have also had opportunities to do job shadows and get hands-on experience in the field. Overall, this class has been an excellent stepping stone to higher education."
Aspyn Stanley, 2021

"This class has been loads of fun and a big learning experience for me. Thanks to the program, I have been able to attend class when my own high school shut down. I have learned all about diesel engines and have even had the opportunity to go on a job shadow to Geneva Rock!."
Devin Peterson, 2021



MEDICAL ASSISTANT *Full Year*

Health Sciences



Instructor: Todd Butler

todd.butler@canyonsdistrict.org

801-826-6640

PROGRAM DESCRIPTION: This is a college level program that requires intrinsic motivation, professionalism, and self-determination. This program provides students with opportunities for growth as they become proficient in medical terminology, medical office administration, and a wide range of clinical skills. Students learn techniques for effective management of patient care and providing a safe environment that promotes healing and wellness. Students who successfully complete this course and the required testing will earn a Medical Assisting Endorsement from the State of Utah and the option to test for the National Medical Assistant Certification.

Canyons Technical
Education Center



MEDICAL ASSISTING

High School Credit: CTE credit or elective credit: up to 4 credits
Concurrent Enrollment: 3 college credits for Medical Terminology. Student is responsible to register and pay for concurrent enrollment Classes at SLCC. For information on these classes, see Appendix.

Industry Certifications: NCCT National Medical Assistant Certification.

Skills Certification: Utah State Medical Assistant Endorsement

Additional Opportunities: HOSA membership

Requirements: In order for students to complete externships, they MUST be a senior while attending the class. Students MUST have completed all required immunizations, background check and pass a urine drug screening.

Recommended: This course is a full year course where students attend every day. GPA of 3.0 is recommended for this course. Science classes such as anatomy, physiology, biology, chemistry, and physics.

COURSE DESCRIPTIONS:

Medical Assistant: Become proficient in medical front office skills such as scheduling appointments and setting up patient records. Learn clinical skills such as measuring vital signs, medical record documentation, and administering EKG.

MA1100 Medical Terminology: Course format is lecture supplemented with videos and discussion covering more than 350 medical word roots, suffixes, and prefixes. Emphasis is placed on pronunciation, spelling, and proper usage of medical terms. Medical abbreviations are also introduced.

Medical Anatomy and Physiology: Learn the structure and function of the systems of the body and how diseases and disorders affect these systems.

Health Science Capstone: This course is designed to help prepare students for a career in healthcare. The course will help students gain professional skills needed, understand the healthcare system, and attain knowledge required to excel in the healthcare field.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Medical Assistant in a physician's office, clinic or outpatient surgical setting

Nurse

Nurse Practitioner

Physician Assistant

Physician



I have loved the Medical Assisting program! It has been so much fun. I have learned a lot in this program. The program has opened so many opportunities in the medical field that I want to go into. WE got hands-on experience with injections, vitals, blood draws, and bedside manner. The program allows students to continue regular schooling without creating added stress. I highly recommend this program to students looking to go into the medical field. It is such an amazing opportunity for students. Olivia Applegarth, 2021

I loved my Medical Assisting experience. I have always wanted to work in the medical field and this program helped me start my journey into the field. It has helped me progress towards my career goals. I was able to take college classes to get my knowledge started. I really enjoyed the hands-on activities and being able to practice with my classmates. I would recommend this program to anyone who wants to take it because I have learned so much. Skyley Brey, 2021

I am so grateful that I took the Medical Assisting program this year! I signed up for this program because I wanted to learn more about medicine, gain clinical skills, and experience a clinical setting. This program gave me all of that and more, all before I graduated from high school! Throughout this year, I have loved learning about medical terminology, anatomy and physiology, various clinical skills and other administrative skills. The things that you learn while in the program are real, applicable things that will help you if you choose to continue down a path in medicine. Ella Fetzer, 2021



Instructor: TBA

801-826-6641

PROGRAM DESCRIPTION: This program is designed to introduce a field of science that incorporates both science and criminal justice. Students will learn to identify, collect and analyze evidence using the scientific method and deductive reasoning. Medical forensics involves many aspects of health science instruction including anatomy, physiology, microscopy, lab safety, and clean techniques. Career exploration will include hands-on experience with evidence identification, measurement and collection, blood spatter documentation and analysis, microscopic examination, chemical analyses, death investigation, and more.



High School Credit: CTE credit or elective credit: up to 2 credits and a possible science credit.

Concurrent Enrollment: 6 college credits through SLCC, pending. Student is responsible to register and pay for concurrent enrollment classes at SLCC. For more information on these classes, see Appendix.

Skills Certification: Utah State Skill Certificate Test

Additional Opportunities: HOSA membership

Required: ACT or SLCC Placement Test results

Recommended: General Biology and Introduction to Criminal Justice

COURSE DESCRIPTIONS: See Concurrent Enrollment Appendix.

CJ 1350/Medical Forensics- Intro to Forensic Science: This semester course is designed to introduce the field of forensic science. The focus is on introductory skills necessary to prepare students for careers such as crime scene technician, criminalist or forensic scientist.

Biology 1090/Advanced Health Science- Medical Anatomy & Physiology (pending): This is a semester course designed to prepare students for a health science career. Paired with medical forensics, the focus will be on the normal functions of the human body in order to aid in determining the manner and cause of death as determined by a medical examiner.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Crime Scene Technician
Forensic Psychologist
Criminalist
Forensic DNA Analyst
Fingerprint Analyst
Drug Chemist
Toxicologist

Forensic Pathologist
Medical Examiner
Forensic Nurse Examiner
Blood Spatter Analyst
Firearms Examiner
Forensic Serologist
Clinical Laboratory Technician



"I loved taking Medical Forensics at CTEC. We learned new information every day. All the units were very interesting. The field trips were fun and informative. Being at CTEC didn't feel like my regular high school and I was able to meet people from other schools. It was never boring in class. The teacher is fun and really explains things in a way you can understand". Zoey Sadler

"Medical Forensics is a great class, students are able to do a lab or two almost every week in order to apply what we learn in class. It is a very hands-on class. We learn to look at all sides of the story. We learn something new every day and I can understand so much more about what is going on in medical and forensic shows". Blake Gentilcore

NURSE ASSISTANT (CNA) *Semester*

Health Sciences



Instructor: Mary Lee Hackman

marylee.hackman@canyonsdistrict.org

801-826-6658

PROGRAM DESCRIPTION:

Students will provide patient care, assess patient wellness, report changes in patient condition, measure intake/output, perform range of motion, and measure vital signs - blood pressure, pulse, respiration, and temperature, along with height, and weight. Additionally, students will assist with lifting, moving, walking, turning and positioning patients. CPR and 1st Aid, medical terminology, basic human anatomy and physiology concepts will be taught.



High School Credit: CTE credit or elective credit: up to 2 credits

Concurrent Enrollment: 5 college credits available. Student is responsible to register and pay for concurrent enrollment classes at SLCC. For more information on these classes, see Appendix.

Industry Certification: Students prepare to take the State Nurse Assistant Certification Test.

Skills Certification: Utah State Skills Certification Test

Additional Opportunities: Students may experience youth leadership and service through HOSA.

Requirements: Excellent attendance, students must attend one clinical session each week, above and beyond class time. Must have current immunizations: Hepatitis B series, Tuberculosis (TB) skin test, Tdap, Measles, Mumps, and Rubella (MMR), Flu and Varicella vaccine. Students must pass a urine drug screening.

Recommended: Biology, Health Occupations, Medical Anatomy and Physiology, and Health Sciences

COURSE DESCRIPTIONS:

Nurse Assisting: Nurse assisting is the fastest growing profession in the U.S. This class will lead to certification so students may obtain a job in the healthcare field. Most Utah colleges highly encourage or require CNA experience to apply to nursing or medical degree programs.

MA1100 Medical Terminology: Uses videos and lecture to cover over 350 medical prefixes, elements, and suffixes. Learn the proper usage, pronunciation and spelling of medical terminology.

HLTH 1200/Emergency Medical Responder: Students learn how to perform CPR and first aid, and have the opportunity to obtain certification while taking this class.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

CAREER POSSIBILITIES:

CNA

Nurse

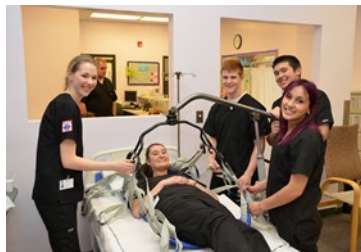
Nurse Practitioner

Respiratory Therapist

Occupational Therapist

Physician Assistant

Physician



The CNA program at CTEC is an amazing class to take if you are interested in pursuing a career in the medical field. I really enjoyed taking the class because I was able to get a lot of hands-on practice. The instructors are very skilled and great at teaching. I felt very prepared to take the certification exam at the end of the semester because of how well the skills were taught. Working as a CNA will allow me to obtain experience and prepare me for my future career in medicine. At the end of the semester, you will not only become a competent CNA, but also proficient in medical terminology as well as anatomy and physiology. I highly recommend this course to anyone who is interested! Sarah Aldulaimi, 2021

Throughout my high school experience, I had never felt like I found a group of people that I truly belonged with, until I took the CTEC CNA program my senior year. Throughout the program, not only did I truly discover my passion for having a career in the medical field and my love for helping and caring for other people. Mrs. Hackman and Ms. Burrows, along with all the other nurses help to create an environment where you feel comfortable, loved, and supported. The people in the program truly made me feel like I belonged and I made some of my closest friends in the program. Mrs. Hackman taught the curriculum in an amazing way that helped create understanding and knowledge of the material. I would recommend the CNA program to anyone that wants to go into the medical field. Abbey Stark, 2021



PHYSICAL THERAPY *Semester*

Health Sciences



Instructor: Austin Giove

austin.giove@canyonsdistrict.org

801-826-6646

PROGRAM DESCRIPTION: This program is designed for students interested in the rehabilitation career field of physical therapy. Students will learn skills required to function as a therapy or rehabilitation technician including therapy treatments, communication skills, patient transfers, patient ambulation, patient range of motion, clinic policies and procedures, and professionalism. Students will learn to assist physical therapists and physical therapist assistants in managing patient care in a rehabilitation setting such as outpatient, hospital, and skilled nursing facilities. Students will demonstrate abilities such as evaluating patient range of motion, therapeutic exercise, interpersonal and professional communication skills, and basic and functional human anatomy. Students will participate in clinical observations.



High School Credit: CTE credit or elective credit: 2 credits
Concurrent Enrollment: 2 college credits available. Student is responsible to register and pay for concurrent enrollment at UVU. For more information on these classes, see Appendix.

Skills Certification: Utah State Skills Certification Tests

Additional Opportunities: Physical Therapy clinical hours, Utah Skill Physical Therapy Aide Endorsement, Utah Skills Sports Medicine Endorsement, BLS CPR Certification, Concussion Prevention Certification, Heat Illness Prevention Certification, NSCA Certified Personal Trainer (CPT Certification), Compete in HOSA State/National Championships

Recommended: Anatomy, Physiology and Exercise Science

COURSE DESCRIPTIONS:

Introduction to Physical Therapy: This course introduces students to the field of physical therapy through the history, medical terminology, documentation, therapy treatments, and pertinent legal and ethical considerations of the profession. Healthcare for a diverse population begins its thread in this course. Students will participate in clinical observations.

PES 2400/Exercise Science/Sports Medicine: This course is designed to introduce the student to the area of physical therapy and athletic training. Students will also learn components of sports medicine including human anatomy and physiology, injury prevention, first aid practices, injury evaluations, healing processes, therapeutic modalities, sports nutrition, performance skills, and career options.

EDUCATIONAL OPPORTUNITIES:

Students have the opportunity to further their education at a community college for an Associate's Degree in the much needed field of Physical Therapy Assisting. Students can also go on to a Bachelor's Degree in a related field, and then obtain a Doctor of Physical Therapy Degree.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Rehabilitation Technician
Physical Therapist Assistant
Physical Therapist
Physical Therapy Aide
Certified Personal Trainer

Physician
Surgeon
Athletic Trainer
Sports Psychologist
Certified Strength and Conditioning Specialist



"This class has been the best course decision I have made in all of my high school career. Unlike other classes, we learn hands on and can apply what we learn to a physical therapy or Exercise Science profession". Nichols Berndt

"This class is really applicable to the real world. It not only gives you an in depth view of physical therapy, but also an overview of other health professions relating to rehabilitation which helps you know what you want to do in the future". Riley Wood

"This class gives you fantastic hands-on experience. The teacher, the curriculum and the experience are all a part of what makes this class so unique and educational". Tristynn Faris

"This is a class that you do not want to miss out on. Experiencing physical therapy hands-on, practicing techniques, and how to provide the best care for a potential patient. Every day is something new and fun to participate in". Lexi Walker

"I wish I could be in this class all year. I have learned so much from physical therapy. We always do fun activities and always have fun. There is a positive attitude in the class". Hannah McClure

"I like that we actually get up and do the exercises and things that we are learning about on ourselves. It is so much more interesting than just sitting taking notes and doing bookwork all class period". Rebekah Oakeson



PROGRAMMING/SOFTWARE DEVELOPMENT *Full Year*

Information Technology Education



Instructor: Cody Henrichsen

cody.henrichsen@canyonsdistrict.org

801-826-6651

PROGRAM DESCRIPTION: This course is a college level introduction to computer science concepts. These concepts include data representation/abstraction, recursion, software engineering, sorting/searching, and object oriented programming. Student's problem-solving skills will be developed through designing, implementing, and executing computer programs. The Java programming language will be used for the majority of the class. Students will work with desktop, mobile and database development. Students will be prepared to take the AP Computer Science Principles and AP Computer Science A exams. They will have opportunities to participate in programming competitions against other schools and gain marketable skills before they graduate high school.

```
public void takeComputerScience()
{
    //Code
    //the
    //future
    //@CTEC
```



High School Credit: CTE credit or elective credit: Up to 4 credits total and a possible math or science credit

Concurrent Enrollment: 12 college credits required. Student is responsible to register and pay for concurrent enrollment classes at SLCC and Weber State University. For more information on these classes, see Appendix.

AP Credit: AP Computer Science tests available

Additional Information: Compete in programming competitions

Industry Certifications: TBD

Skills Certifications: Utah State Skills Certificate Tests

Requirements: Secondary Math II completed. All 2nd semester classes require passing the 1st semester (College requirement).
Keyboarding and basic computer skills.

COURSE DESCRIPTIONS:

CSIS 1400 Fundamentals of Programming: Students will learn the basics of programming using Java including GUI development.

AP Computer Science Principles: Students will use the Swift programming language to develop iOS applications to learn about computer science and software development principles and address real world topics.

CSIS 1410 Object Programming: Students will create more complex GUI applications including a game using Java. Build more complex applications that involve data structures and prepare for the AP Computer Science A Exam.

CS 2550 Database Design: Students will design and implement databases using SQL. Students will solve database problems using simple and complex queries on datasets.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Computer Programmer
Game Developer
Software Engineer
Computer Engineer

Software Developer
Database Developer
Database Administrator



"I really enjoyed the programming class at CTEC because of the fun projects, and the great instruction. It is a lot of hands-on learning, which makes concepts easier to understand. My favorite project that we did was programming Lego robots in Java". L. Wyness



WELDING TECHNICIAN *Full Year*

Skilled and Technical Sciences



Instructor: Dalton Magee

dalton.magee@canyonsdistrict.org

801-826-6638

PROGRAM DESCRIPTION: The skills and experience gained in this class will prepare you for the careers of the future. The demand for skilled welders is at an all-time high. Students will gain skills in a range of welding processes including SMAW, FCAW, GMAW, and GTAW. Cutting processes including oxy-fuel, plasma and mechanical cutting will be used. Project creation, design, and layout will be emphasized. This course can prepare you for a welding career, or it can open opportunities to better summer and college jobs and a career to fall back on. Soft skills are a high priority. This means being on time, attending consistently, working with others, and following safety procedures.



High School Credit: CTE credit or elective credit: Up to 4 credits
Concurrent Enrollment: 3 college credits available. Student is responsible to register and pay for concurrent enrollment classes at SLCC. For more information on these classes, see Appendix.
Skills Certification: Utah State Skills Certificates and AWS SENSE certification opportunity.
Additional Opportunities: Participate in SkillsUSA competitions and leadership rolls.
Recommended: This class is for any student who enjoys working and learning in a hands-on environment. No prior welding experience needed.

COURSE DESCRIPTIONS:

Entry Welding Technician: This is an entry level course that will teach basic welding skills. This course will prepare students to apply technical knowledge and skill in the workplace and in project construction. SMAW and GMAW welding will be the main welding processes covered in this portion of the class.

Intermediate Welding Technician: This is an intermediate level course that will teach the next level of welding skills. This course will dive deeper in the GMAW process along with FCAW. How to plan, prepare, and construct projects will be covered.

Advanced Welding Technician: This is an advanced welding skills course. This course will teach students the processes that will prepare them to apply technical knowledge and skill in the workplace and in project construction. A focus on project creation, structural welding and refining welding techniques will be the main focus. An introduction to the GTAW process will also be covered.

WLD 1005 Related Welding: Students will learn basic principles of the arc and acetylene welding including flat and horizontal welds; brazing and cutting techniques.

Costs/Fees for the 2022-2023 school year: Pending school board approval.

Career Possibilities:

Welding Technician
Welding Repair Technician

Welding Engineer
Welding Salesman

Welding Inspector
Welding Instructor



"I believe that in joining welding, I have greatly improved my future in many fields and I will almost never have financial troubles". Shawn

"Taking the welding class has helped me a lot. I have learned skills that will help me throughout my life. I am very glad to have taken the class". Austin

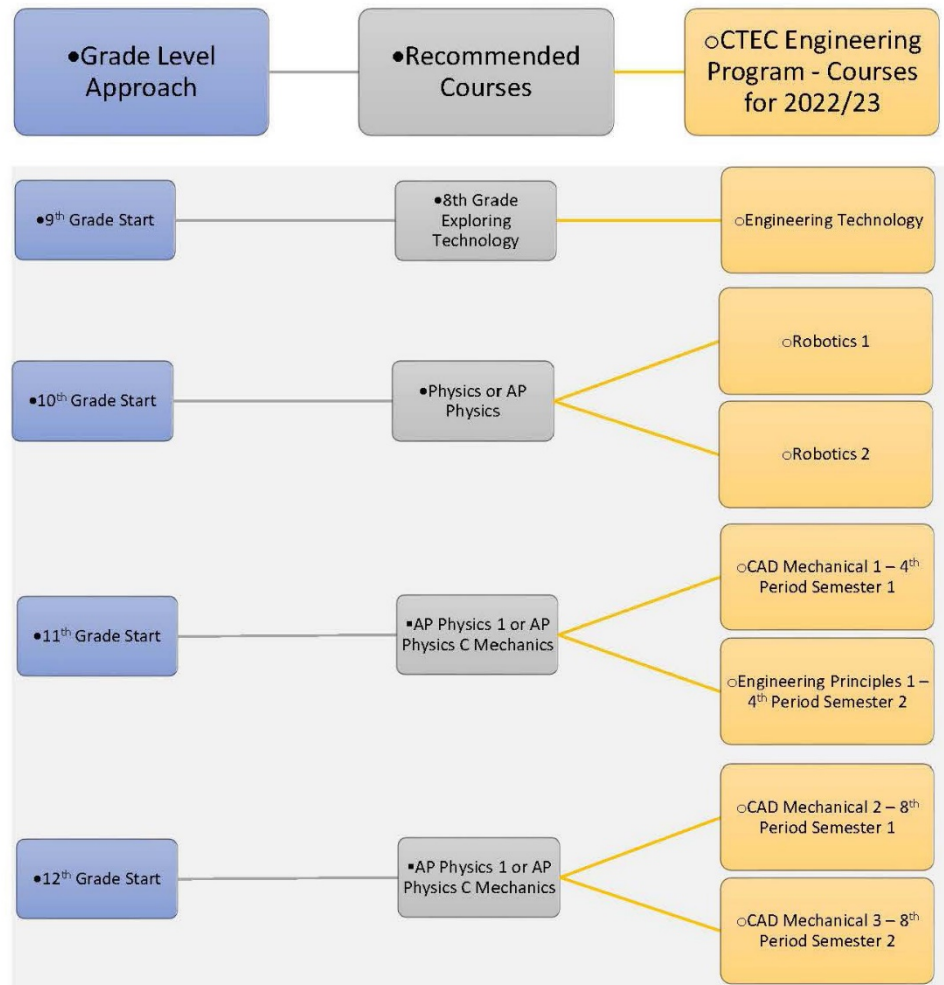
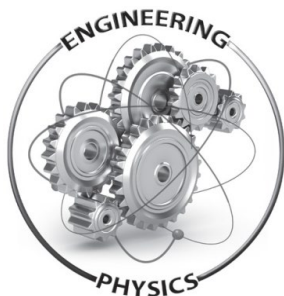
"Taking this class has been a very good experience for me. I have learned valuable life skills and more". Anthony

"Welding is an invaluable skill. There are many job opportunities for a certified welder. Welding is all over the world and in many fields such as underwater and construction. Welding teaches patience and control. It truly is a valuable skill to learn". Caleb



Canyons School District Engineering Program at Alta High School

*This program is open to all Canyons School District students



Recommended Class Sequence

Engineering Technology should be taken during 9th grade, but can be taken anytime during the four years of high school. It must be taken before or concurrently with Robotics 1 & 2.

Robotics 1 & 2 should be taken during 10th or 11th grade, but can be taken anytime during the four years of high school. It can be taken concurrently with CAD Mechanical 1 and Engineering Principles 1. (*AP Physics recommended*)

CAD Mechanical 1 Period 8 only (*SLCC College Credit*) and **Engineering Principles 1** can only be taken in 11th or 12th grade. *No prerequisites required. (AP Physics or AP Physics C Mechanics recommended)*

CAD Mechanical 2 & 3 Period 3 only (*SLCC College Credit*) can only be taken during 11th or 12th grade. It should be taken after CAD Mechanical 1 and Engineering Principles 1.

Course Descriptions

ENGINEERING TECHNOLOGY

A foundational engineering design course that introduces basic problem-solving and documentation skills. Various aspects of engineering will be explored along with technology's environmental, societal, political, and economic impacts on our world. By utilizing problem-solving skills, students will develop essential abilities and attitudes that will, in turn, expand their occupational opportunities in the world of engineering.

ROBOTICS

A lab-based, hands-on curriculum combining electrical, mechanical and engineering principles. Students will learn to design, build, program and control robotic devices by applying science, technology, engineering, and math concepts. A rigorous study and application of electrical concepts will include sources of energy, electrical safety, use and identification of basic electronic components, sensors, and actuators. Engineering concepts will include: mechanical design, prototype development, design testing, programming, and proper engineering documentation. Industrial automation, robotic applications, and career opportunities will also be discussed.

CAD MECHANICAL

Introduces high school students to the engineering design process and to the properties of good design. Students will plan, complete, and document a number of analysis-based designs. Skills will be developed in the creation of memos, design reports, and technical drawings using 2D/3D CAD software. The course content will be covered through a series of hands-on activities.

ENGINEERING PRINCIPLES

A hands-on course that ties together observations and concepts common to a variety of different engineering disciplines in order to develop a better understanding of basic math and science principles used in engineering. By utilizing problem-solving skills in a laboratory environment, students will develop skills and attitudes that impact and expand occupational opportunities.

AP PHYSICS 1/HONORS PHYSICS

Highly recommended for grades 11-12. Students must have successfully completed Secondary Mathematics II. AP Physics 1 is the equivalent of a first semester algebra-based college physics course, but it is designed to be taught over a full academic high school year to enable AP students to develop deep understanding of the content. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy and power; mechanical waves and sound; and an introduction to electric circuits. As part of this class students have the opportunity to complete 10 labs outside of the school day at the University of Utah for university credit.

AP PHYSICS C MECHANICS

Highly recommended for grades 11-12. Students must be concurrently enrolled in AP Calculus and have completed an introductory physics course. AP Physics C Mechanics is the equivalent of a first semester calculus-based college physics course, but it is designed to be taught over a full academic high school year to enable AP students to develop deep understanding of the content. The focus of AP Physics C Mechanics is classical Newtonian mechanics. It is especially appropriate for students planning to enter careers in engineering or physical science. University credit can be earned with a successful performance on the Advanced Placement exam. As part of this class students have the opportunity to complete 10 labs outside of the school day at the University of Utah for university credit.

MIP

Housed at Jordan High School and taught by Travis Rowley, these courses are available to all Canyons School District seniors. Students interested in engineering or biomanufacturing will learn the manufacturing process from start to finish with project based activities, and complete job shadows and externships with leading bio-manufacturing companies. Employment, career opportunities, and college tuition reimbursement are available.

Utah's medical device industry is the fastest growing industry in Utah, and is growing so quickly that it threatens to outpace the state's ability to provide enough workers to fill the skilled jobs the industry requires. A lucrative and exciting job in biotechnology or medical manufacturing could be in your future.

This is a great class for students interested in pursuing a career in any of the engineering fields, as the manufacturing process is critical to all engineering processes. This is also a great opportunity for those wishing to start a career right out of high school.

Seniors in high school spend the first semester in a manufacturing principles course, learning the history of the industry, product development, operational structures and optimization, cost and quality control.

Second semester includes a course in biomanufacturing, exploring the medical device industry, FDA regulations as they apply to the medical device industry, and careers in this field.

Careers & Salary

Median Average
Hourly Wage: \$13 - \$27

Length of Program

8th Period, full year
1.0 CTE credit

Certifications

Medical Innovations Pathway Certificate

Reasons to take MIP

- Exciting jobs right after high school
- Build a rewarding career
- Earn above market wages, excellent benefits
- Receive potential tuition support for a college degree

Courses

Manufacturing Principles 1 (.5 credit)
Biomanufacturing 1 (.5 credit)

More Information

travis.rowley@canyonsdistrict.org



Industry Partners



BD Medical



Edwards Lifesciences



Concurrent Enrollment - Appendix 2022-2023

Course Title	Course Code	Credit Type	Grade Level	High School Credits	Concurrent Enrollment Credits
Business Leadership - SLCC					
BUS 1010 / Intro to Business	9844	CTE, Elective	11-12	0.5	3
ECON 1010 / Economics for Social Sciences	9834	CTE, Elective	11-12	0.5	3
Construction Management - SLCC					
CMGT 1410 / Const. Materials & Methods	9864	CTE, Elective	10-12	0.5	2
CMGT 1320 / Building Construction I	9865	CTE, Elective	10-12	1	4
CMGT 1330 / Interior Finishes I	9867	CTE, Elective	10-12	0.5	4
Cosmetology/Barbering - USU Eastern					
COST 1100 / Orientation	9950	CTE, Elective	11-12	1	5
COST 1110 / Orientation Lab	9951	CTE, Elective	11-12	1	6
COST 1200 / Barbering Theory	9952	CTE, Elective	11-12	1	5
COST 1210 / Barbering Lab	9953	CTE, Elective	11-12	1	6
COST 2300 / Intermediate	9956	CTE, Elective	11-12	1	5
COST 2310 / Intermediate Lab	9957	CTE, Elective	11-12	1	6
COST 2400 / Advanced	9958	CTE, Elective	11-12	1	5
COST 2410 / Advanced Lab	9959	CTE, Elective	11-12	1	6
Criminal Justice - SLCC					
CJ 1010 / Criminal Justice	9150	CTE, Elective	11-12	0.5	3
CJ 1300 / Intro to Corrections	9152	CTE, Elective	11-12	0.5	3
CJ 1330 / Criminal Law	9151	CTE, Elective	11-12	0.5	3
CJ 2540 / Careers in Law Enforcement	9155	CTE, Elective	11-12	0.5	3
Digital Media - SLCC					
ART 1080 / Photoshop & Digital Media	8667	CTE, Elective	11-12	1	4
Emergency Medical Technician (EMT) - SLCC					
HSEM 2300 / Emergency Medical Technician (EMT)	9730	CTE, Elective	11-12	2	6
Heavy Duty Mechanics / Diesel - SLCC					
DST 1045 / Basic Diesel	9040	CTE, Elective	10-12	1	4
DST 1065 / Basic Engine Performance	9042	CTE, Elective	10-12	1	4
Medical Forensics - SLCC					
CJ 1350 / Medical Forensics	9129	CTE, Elective	11-12	1	3
Medical Assistant - SLCC					
MA 1100 / Medical Terminology	9725	CTE, Elective	11-12	0.5	3
Nurse Assistant (CNA) - SLCC					
MA 1100 / Medical Terminology	9725	CTE, Elective	11-12	0.5	3
HLTH 1200 / First Aid & Safety	9118	CTE, Elective	11-12	0.5	2
Physical Therapy - UVU					
PES 2400 / Exercise Science & Sports Medicine	9175	CTE, Elective	11-12	1	2
Computer Programming - SLCC & WSU					
CS 1400 / Fundamentals of Programming	5711	CTE, Elective, Mathematics	11-12	1	4
CS 1410 / Object Programming	5712	CTE, Elective, Mathematics	11-12	1	4
CS 2550 / Intro to Database Design & SQL	5717	CTE, Elective	11-12	1	4
Welding Technician - SLCC					
WLD 1005 / Related Welding	9027	CTE, Elective	10-12	1	3



Please see ctec.canyonsdistrict.org for more information and to apply!

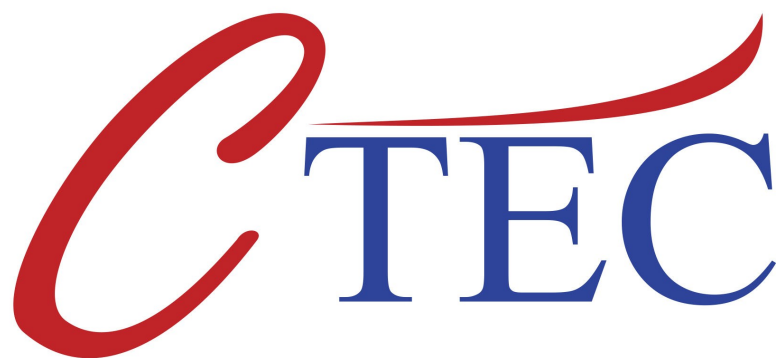
Class / Program Information

ctec.canyonsdistrict.org		825 East 9085 South, Sandy, UT 84094	Doug Hallenbeck, Principal, (801) 826-6601	
		(801) 826-6600	Emalee Brown, CTE Coordinator, (801) 826-6621	
PROGRAM		DESCRIPTION	Certifications	College Credit Available
Academy of Information Technology				
	Cybersecurity / Networking	Build and secure computer systems and networks with hands-on labs and cybersecurity briefings. This course prepares students for successful job placement by earning industry certifications in IT and cybersecurity.	MTA: OS, Network, Security, Server Admin. TestOut: PC Pro, Network Pro, Security	
	Digital Media	Learn to use digital media, 3D animation and digital editing software, 2D and 3D graphics, audio and video to prepare for jobs in graphic design and the multimedia industry.	Photoshop, Flash, Premiere, Illustrator, Dreamweaver	4 SLCC Credits
	Programming/Software Development	Learn advanced programming skills and develop software applications. Build computer programs and apps for mobile devices, the internet, and gaming systems. Earn industry certifications. Intro to IT.	C#, JAVA, MTA, Adobe	8 SLCC credits 4 WSU credits
Business				
	Business Leadership/ Project Management	Be a business professional and learn skills such as: communication, creating business plans, and essential workplace skills. Build your resume and work on real industry projects.		6 SLCC credits
Health Sciences				
	Certified Nurse Assistant (CNA)	Learn patient care, anatomy, physiology, nutrition, medical terminology, first aid, and CPR. Prepare to take the state CNA exam. Participate in clinicals at a hospital or care facility.	Utah CNA License	5 SLCC credits
	Emergency Medical Technician (EMT)	Learn training standards for EMT, administering basic life support, splinting, airway management, rapid extraction, emergency childbirth, etc. Prepare to take the state EMT certification exam.	Utah EMT License and NREMT Certification	6 SLCC credits
	Medical Assisting	Learn clinical skills to work in a physician's office. These skills include: taking vital signs, drawing blood, giving shots, performing simple lab tests, and documenting medical records. Clinical externship.	Utah and National Medical Assistant Certification	3 SLCC credits
	Medical Forensics	Solve mysteries using problem solving techniques. Learn Health Science skills such as microscopy, toxicology, measurements, physical evidence ID, pathology, entymology, and photography.		6 SLCC credits
	Physical Therapy	Learn physical therapy skills such as: therapy treatments, communication skills, patient transfers, patient ambulation, patient range of motion, clinic policies, procedures and professionalism.		2 UVU credits
Skilled and Technical Sciences				
	Construction Management	Learn construction management skills including managing and participating in framing, roofing, painting, finish carpentry and concrete finishing. Build a project house from start to finish.		10 SLCC credits
	Cosmetology / Barbering	Learn hair styling, cutting, coloring, perming, chemical relaxing, skin care, and nail care with emphasis on safety, sanitation, and professionalism. Will have constant exposure to clients to practice.	Prepare for Utah DOPL and Utah Cosmetology/ Barbering License	44 USU-Eastern credits
	Criminal Justice	Learn about the criminal justice system, including law enforcement officer functions, criminal law, and diversity of law enforcement careers. Learn take-down tactics, arrest techniques, interacting with the public.		12 SLCC credits
	Heavy Duty Mechanics / Diesel	Learn diesel technician competencies in the following areas: safety, brakes and bearing adjustments, air brake systems, electrical repair and trouble shooting, complete engine overhaul, suspensions, and many more.	ASE Certifications in Brakes, Engines, Electrical Systems, Suspension/Steering	8 SLCC credits
	Welding Technician	Learn technical skills and knowledge through hands on lessons in gas and electric welding, metal fabrication, plasma cutting, pipe welding, and more. American Welding Society task list emphasized.	Utah Skills Certificates, AWS Welding Certifications	3 SLCC credits
Technology and Engineering				
	Engineering Capstone	These courses are housed at Alta High and are available to all Canyons School District high school students. See the CTEC catalog for a full description of the courses and the recommended class sequence.	Utah Skills Certificates	3 SLCC credits
	Medical Innovations Pathway	Housed at Jordan High, these courses are available to all Canyons School District seniors. Learn the manufacturing process from start to finish. Complete job shadows and externships with bio-manufacturing companies.	Medical Innovations Certification	

Juniors and Seniors can enroll in any classes unless indicated as "Seniors Only"

Last Revised: 12/13/21

- Seniors Only
- Semester Class
- Sophomores can enroll in addition to Juniors and Seniors



PRODUCTIVE

RESPONSIBLE

ENGAGED

PROFESSIONAL

SUCCESSFUL

STUDENTS