CTE PATHWAYS

2024 - 2025

FIND YOUR PATH

What is Career & Technical Education?

Taking CTE courses in high school can lead to FREE COLLEGE CREDIT and/or ADVANCED PLACEMENT in Kansas community colleges & universities. The best reason to take CTE courses is to "test drive" a career area and have **PRACTICAL/HANDS-ON experience in addition to the "book knowledge"** before heading off that career after high school.

What Do the Levels Mean?

INTRODUCTORY COURSES are beginning classes designed to "introduce you" to the general idea and theories of the pathway. Time will be spent exploring what direction you can go if you want to learn more.

TECHNICAL COURSES are the next level and designed to allow some technical application of your knowledge. These courses are more specific in content.

APPLICATION COURSES allow you to APPLY your knowledge in real life or simulations. Many of the application courses encourage INTERNSHIP and/or WORK experiences in the field.

HOW DO I GET COLLEGE CREDIT?

1. Some courses are **technical skill** DUAL-CREDIT.

2. Other courses are general education DUAL-CREDIT.

3. Each participating college has an "Articulated Agreement" with Kansas high schools. Most are published on the KSDE website, but some institutions have individual agreements with high schools (i.e. Cowley). To earn college credit, students would need to take a series of CTE courses in one or more pathways, and complete other requirements (i.e. internship hours, pay a fee, take a test, declare a major in that area at the receiving college) to receive the credit. **Go to www.ksde.org and search** STATEWIDE ARTICULATION AGREEMENT CHART

4. **or to see the latest information talk with your CTEinstructor(s).**

CAREER & TECHNICAL EDUCATION / ELECTIVE COURSES

Work-Based Learning

WBL includes a continuum of awareness, exploration and preparation. WBL combines an individual's career goals, structured learning and authentic work experiences.

Internships

Learners perform meaningful job tasks at worksite or approved location, under the guidance of a qualified supervisor.
- Should qualify for high school credit.
- Minimum 140 hours within a calendar year.
- Performance evaluated by the work manager in addition to the educator.
- Internship completion is substantive enough to be included on students' resume.

Client Projects

Learners analyze and solve authentic problems, working in collaboration with other learners and professionals from industry, not-for-profit, civic or community-based organizations.
- Work involves authentic methods and tools used by professionals in the work environment.
- Experience includes mentoring and evaluation by working professionals.
- Output is viewed as value-add by external stakeholders and resume-worthy.

How to Apply for WBL:
1. You must be a second semester junior or a senior.
2. You must commit to 2 hours of your daily schedule.
3. You complete the google form/application when enrolling for courses in the spring.
   i. (WBL Google Form Link)
4. You will be required to attend an informational meeting prior to enrollment to understand internship requirements.
5. You must have a placement secured within the first week of school or your schedule will be changed.
   a. Students must assist with placement.
   b. Staff will help, but ultimate responsibility is with the student.
   c. Once the school year begins, the student will
   d. Spend the first week making sure all paperwork is in order and placement is confirmed

What are my options after high school?

- 4-year colleges & universities
- 2-year community colleges
- Technical colleges
- Apprenticeships
- Employment
- Certificate programs
- Gap Year experiences
- Military

You can explore; acquire skills; earn certifications; and college credit prior to graduating from high school. Planning, acting, and continuing to reevaluate yourself and your goals is key to success and preparation for what lies ahead after graduation. Here are some questions to help guide your decisions:

What is the HIGHEST level of coursework in each area I would like to achieve? Can be a different level for each area (i.e. math = higher level and English = regular level).

What do I need to do to transition from high school to the "next level"?

How can I grow in terms of leadership, communication, teamwork and work ethic skills while in high school through a combination of coursework and extracurricular activities?

Have I made sure I am meeting requirements for selective programs?

- ☐ NCAA OR NAIA (www.ncaa.org and/or www.playnaia.org)
- ☐ CAREER PATHWAY CERTIFICATIONS
- ☐ KANSAS QUALIFIED ADMISSIONS
- ☐ OUT-OF-STATE SCHOOLS (go to individual university websites)
- ☐ SELECTIVE ADMISSIONS (go to individual university websites)
- ☐ TECHNICAL PROGRAMS (for Kansas go to www.kansasregents.org and search technical programs)
- ☐ MILITARY (ROTC, SERVICE ACADEMIES, ETC) (contact area recruiters and/or go to www.gomilitary.com)
- ☐ APPRENTICESHIP PROGRAMS (for Kansas go to https://ksapprenticeship.org/

What do my results from various career inventories (i.e. Xello, ACT World of Work, & ASVAB) seem to say?

- ☐ Have I considered my test scores? ACT Aspire, ACT, ACCUPLACER, ASVAB?
- ☐ Have I met with my counselor to explore all my options?
- ☐ Have I read ALL the course descriptions, and do I understand what will be expected from me in the courses I choose?
- ☐ Do I want to begin taking classes at WHS for college credit (dual-credit) and/or earn certifications (CTE)?
- ☐ Do I want to be **RELEASED** from WHS to take college credit and/or do an internship and/or work, and/or pursue/college credit through Cowley

Benefits of Career Clusters

Why use career clusters to explore careers and plan your future? Thinking ahead and preparing for careers is helpful if you are headed to the workplace or college. Some careers that are common today may not be needed tomorrow. And all careers require flexibility, knowledge, and skills.

WHS Career and Technical Education

On the following pages is a listing of the pathways offered at WHS. Students can earn either a "completer" or a "concentrator" status. KSDE defines each as follows:

Completer: A student who has completed a minimum of 2 secondary level credits in a single CTE pathway with at least 2 of those credits being a combination of technical and application-level courses. A completer must also earn or complete at least one of more of the following:
- Earn an end of pathway assessment/certification for completer status (industry-recognized certification or a passing score on a third-party, end-of-pathway assessment)
- Earn an Excel in CTE Qualifying Recognized Credential aligned to the Pathway
- Earn nine (9) + college hours leading to completion of a certificate or post-secondary program aligned to the Pathways Program of Study
- Complete a high-quality work-based learning career preparation experience, Kansas WorkBased Learning Continuum, in the Pathway defined in Kansas Work-Based Learning: Personalized Learning Plan Guidance Document (ksde.org)

Concentrator: A student who has earned two (2) or more secondary level credits in a single CTE pathway, which are a combination of at least two of the three levels: Introductory, Technical and Application and meets a 70% proficiency on a technical skills assessment measured by the average of the letter grades, an average percentage on end-of-course assessments, or on the competency profile.

WHS Career and Technical Education

Animal Science Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Intro to Agriculture	18001	1	8
Technical	Animal Science	18101	1	9
Technical	Small Animal Care	18102	1	10
Technical	Animal Health/Vet Tech	18105	1	10
Application	Agricultural Business	18201	1	11
Application	Agricultural Leadership & Communications	18203	1	11
Application	Research in Agriculture	18206	1	11
Application	Internship	18048	1	12
Application	Advanced Internship	18049	1	12

Comprehensive Agricultural Science Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Intro to Agriculture	18001	1	8
Technical	Animal Science	18101	1	9
Technical	Horticulture	18102	1	9
Application	Agricultural Business	18201	1	11
Application	Agricultural Leadership & Communications	18203	1	11
Application	Research in Agriculture	18206	1	11
Application	Internship	18048	1	12
Application	Advanced Internship	18049	1	12

Plant Systems Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Intro to Agriculture	18001	1	8
Technical	Horticulture	18102	1	9
Application	Applications in Horticulture	18071	1	10
Application	Floriculture and Greenhouse Management	18057	1	10
Application	Agricultural Business	18201	1	11
Application	Agricultural Leadership & Communications	18203	1	11
Application	Research in Agriculture	18206	1	11
Application	Internship	18048	1	12
Application	Advanced Internship	18049	1	12

WHS Career and Technical Education

Power, Structural and Technical Systems Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Intro to Agriculture	18001	1	8
Introductory	Exploratory Agriculture	68001	1	8
Technical	Agricultural Welding I	18404	1	9
Application	Agricultural Welding II	18407	1	10
Application	Agricultural Business	18201	1	11
Application	Agricultural Fabrication	18409	1	12
Application	Agricultural Leadership & Communications	18203	1	11
Application	Internship	18048	1	12
Application	Advanced Internship	18049	1	12
Application	Research in Agriculture	18206	1	12

Construction and Design Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Intro to Industrial Technology	38001	0.5	9
Introductory	Drafting	21102	0.5	9
Technical	Carpentry	17002	1	10
Technical	Woodworking Principles	17007	1	10
Application	Furniture and Cabinetry Fabrication	38007	1	11
Application	Carpentry II	38002	1	11
Application	Electrical & Security Systems	17113	0.5	11
Application	Sheet Metal	13205	0.5	11
Application	Workplace Experience in A & C	38100	0.5	12

Digital Media Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Business Essentials	12050	0.5	8
Introductory	Computer Applications	10004	1	9
Technical	21st Century Journalism	30100	0.5	9
Technical	Photo Imaging	30105	0.5	10
Technical	Graphic Design Fundamentals	30102	0.5	10
Technical	Audio/Video Production Fund	30103	0.5	10
Technical	Sports and Entertainment Marketing	12163	0.5	11
Technical	Graphic Design	05162	1	11
Application	Digital Media Design & Production	30151	1	12

WHS Career and Technical Education

Graphic Design Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Introduction to Drawing	30006	0.5	9
Introductory	Computer Applications	10004	1	9
Technical	Photo Imaging	30105	0.5	10
Technical	Graphic Design Fundamentals	30102	0.5	10
Technical	Computer Graphics	10202	1	10
Technical	Principles of Illustration	30101	.5	11
Technical	Graphic Design	05162	1	11
Application	Media Technology - Workplace Experience	10248	1	12

Business Entrepreneurship and Management Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Business Essentials	12050	0.5	8
Technical	Business Economics	12105	0.5	9
Technical	Agricultural Welding I	18404	1	9
Technical	Culinary Essentials	16052	0.5	9
Technical	Business Communications	12009	0.5	9
Technical	Accounting A & B	12104	1	10
Technical	Principles of Marketing	12164	1	10
Technical	Computer Graphics	10202	1	10
Technical	Carpentry	17002	1	10
Technical	Entrepreneurship	12053	0.5	11
Technical	Business Management	12052	0.5	11
Technical	Web Page Design	10201	1	11
Application	Applied Business Development	32200	1	12

Training and Education Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Career & Life Planning	19258	0.5	8
Technical	Human Growth & Development	45004	0.5	9
Technical	Family Studies	19255	0.5	10
Technical	Teaching As A Career	19151	0.5	11
Application	Teaching Internship	19152	1	12

WHS Career and Technical Education

Health Science Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Intro to Health Care	14000	0.5	9
Introductory	Biology	03051	1	9
Technical	Nutrition and Wellness	19253	0.5	9
Introductory	Chemistry	03101	1	10
Technical	Care of Athletes	14062	0.5	10
Technical	AP Biology	03056	1	11
Technical	Human Anatomy & Physiology	03053	1	11
Technical	College Medical Terminology	14154	0.5	11
Technical	Sports Medicine 1	14072	1	11
Technical	Physical Therapy	14060	1	11
Application	Certified Nursing Assistant	14997	0.5	11
Application	Health Care Workplace Experience	36992	1.0	11
Application	Certified Medication Aide	36156	0.5	12
Application	Home Health Aide	36053	0.5	12

Restaurant & Event Management Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Business Essentials	12050	0.5	8
Introductory	Career & Life Planning	19258	0.5	8
Technical	Culinary Essentials	16052	0.5	9
Technical	Nutrition & Wellness	19253	0.5	9
Technical	Culinary Arts 1	34056	0.5	10
Technical	Principles of Marketing	12164	1	10
Technical	Entrepreneurship	12053	0.5	11
Application	Community Connections	19297	0.5	11
Application	Career Connections	19298	0.5	11
Application	Applied Business Development	32200	1	12

Family and Community Services Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Career and Life Planning	19258	0.5	8
Technical	Human Growth and Development	45004	0.5	9
Technical	Family Studies	19255	0.5	9
Technical	Culinary Essentials	16052	0.5	9
Technical	Nutrition and Wellness	19253	0.5	9
Application	Community Connections	19297	0.5	11
Application	Career Connections	19298	0.5	11

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Web and Digital Communications Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Computer Applications	10004	1	9
Technical	Computer Graphics	10202	1	10
Technical	Graphic Design	11154	1	11
Technical	Computer Programming	10152	1	11
Technical	Web Page Design	10201	1	11
Application	Particular Topics in Media Technology	10204	1	12

Emergency and Fire Management Services Pathway

Level	Course Name	Course Code	Credit	Grade
Introductory	Introduction to Law Public Services & Security	44001	.5	9
Courses are available through Cowley College	EMT 1	44060	1	11-12
	Hazardous Materials for the First Responder	44070	.5	11-12
	Fire Science 1	44100	1	11-12
	Fire Science 2	44101	1	11-12
	EMT 2	44065	1	11-12

WHS Career and Technical Education

EXCEL IN CTE
COWLEY COLLEGE COURSES
TAKE THE FASTTRACK!

The State of Kansas will pay your tuition for qualifying Career and Technical Education classes, so you can take the FastTrack toward earning a degree, certificate, industry-recognized credentials, or work-ready skills. Cowley College's career and technical programs prepare individuals for a wide array of challenging careers in specialized labor markets.

This tuition-free incentive program encourages high school students to gain the training needed to enter a profession and, in many cases, earn an industry-recognized credential prior to graduating from high school.

Qualified juniors and seniors in public, private, and homeschool high schools are eligible for free tuition through the Excel in CTE Initiative for Kansas Residents. Cowley College pays your incidental fees; however, you will need to purchase textbooks and may incur some small program fees. For a list of the courses visit Cowley's website or visit the counseling office.

Cowley College CTE Programs

Career and Technical Education (CTE) prepares individuals for a wide array of challenging careers in a demanding economy and specialized labor market. It provides foundational skills, both technical and academic, that lead to lucrative employment, as well as further educational opportunities.

Cowley College's CTE department is in three locations—Ark City campus (Walker Technology building), Sumner-Cowley Campus and Mulvane Technology Centers.

Free Tuition for High School Students
High school students can take tuition-free CTE classes at Cowley College! The Kansas Board of Regents will pay for the tuition so that students can gain the training needed to enter a profession, and in many cases, earn an industry-recognized credential. Students will need to purchase textbooks and may incur some small fees (tools, background checks as required, supplies, etc.)

Prerequisites for all CTE classes:
1. Students must have a GPA of at least a 2.0.
2. Students will fill out their portion of the Fast Track form, Checklist form, and the permission to release information form (forms located in the counseling office).
3. Students must fill out the on-line college application.
4. Students must take the Next Generation Accuplacer reading assessment either at their high or at the college, and earn a score of 224 or higher. The ACT reading assessment is also acceptable with a score of 16 or higher.
5. Students must be willing to commit to a 2-year program.
6. Students are responsible for transportation to the selected course location for their courses**.**

08301/08302 NONDESTRUCTIVE TESTING
Cowley's Nondestructive Testing program provides tremendous opportunities in safety & quality inspection. The NDT program offers an Associate of Applied Science degree that is currently in high demand. NDT students develop the knowledge and skills required to perform sophisticated testing techniques such as eddy current, x-ray, liquid dye penetrant, magnetic particle, and ultrasonic testing that are currently required in many different industry fields.

You will learn blueprint reading, basic metallurgy, measurement, and proper use of equipment used in the various NDT testing processes. Mid-level mathematics, communication skills, writing, and understanding codes & procedures, materials composure, and basic theories of economics are also integrated into the program.

Upon completion of this program, students will be prepared to develop and maintain quality control programs. Students will be trained to set up and calibrate equipment, as well as interpret and evaluate results based upon Nondestructive testing methods with respect to applicable codes, standards, and specifications. Students will be prepared for the American Society of Nondestructive Testing (ASNT) certification examination.

08901/08902 MANUFACTURING TECHNOLOGY (MECHATRONICS)
Manufacturing Technology (Mechatronics) is the combination of many disciplines. Computer Programming, Electronics, Programmable Logic Controllers, and Robotics are key fields, with specific skills including: panel wiring, machine set-up/troubleshooting, and quality control
Manufacturing Technology (Mechatronics) is the first program in the state to address the demand for specialized technicians. Cowley College continues to address current and future demands, by continually building relationships with industry leaders. Manufacturing Technology (Mechatronics) teaches the design, building, and maintenance of equipment that combines electronics, mechanics, pneumatics, hydraulics, and computer control systems.

08501/08502 WELDING TECHNOLOGY
Cowley's welding program provides tremendous opportunities in new welding development like exotic metal types, laser welding, and working with automated plasma cutters.
Skilled welders work from drawings and specifications, set up and create welds, and examine and inspect welds to ensure specifications are met. Program emphasis is on processes including SMAW, GTAW, GMAW, and structural and pipe welding. Cowley College provides well-equipped laboratories that enable students to receive instruction in oxyacetylene welding and cutting, shielded metal arc welding (SMAW), gas metal arc welding (GMAW), gas tungsten arc welding (GTAW), metallurgy, plasma cam cutting and allied processes.

08401/08402 MACHINE & TOOL TECHNOLOGY
In the Machine Tool Technology classes at Cowley College, students are trained on machine tools that are the standard of the industry. Students will find lathes, milling machines, precision-grinding equipment, and many other machine tools, all of which are of state-of-the-art design. Many of our machines are computer-controlled; students have the opportunity to learn computer numerical controlled programming of these
machines for complex and sophisticated machining processes. Students will also learn quality control methods using the latest measuring and inspection instrumentation. With this type of equipment, students are able to produce aerospace-quality projects. Industry support has made it possible to take classes on field trips, which give greater dimension to the student experience.

WHS Career and Technical Education

08101/08102 AUTOMOTIVE TECHNOLOGY
Cowley's automotive program includes: classroom instruction, hands-on laboratories, and an online CDX subscription. Specific subjects include electrical and electronic systems, suspension and steering, engine performance, manual transmissions and transaxles, heating and air conditioning, engine repair, automatic transmissions, and brakes. Students have the opportunity to work on high tech automobiles using the latest diagnostic tools and equipment.