

# 2026 – 2027 KSDE CTE Resource Guide



USD 292  
Wheatland Schools

Home Of The Thunderhawks



*Kansas leads the world in the success of each student.*

# 2026-2027 KSDE CTE Resource Guide

The Kansas State Department of Education (KSDE) Career and Technical Education (CTE) Resource Guide is a comprehensive guide containing relevant information regarding career opportunities available for Kansas students to explore.

Career and Technical Education is organized into educational activities that offer a sequence of courses.

This provides individuals with the rigorous academic content and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions, which may include high-skill, high-wage or in-demand industry sectors or occupations.

In Kansas, we focus on six industries. Throughout this guide they are consistently identified by colors and icons. Occupations are then organized around knowledge and skills that have common characteristics and job duties, known as career clusters. Kansas identifies a total of 13 broad career clusters. Additionally, 31 career pathways represent the career, education and training options available to students in each of these industries. On the next page you will find the “Kansas CTE Sunflower” image, along with a list of industries listed in bold, and the clusters italicized with the pathways listed below each of them.



## OVERALL RESOURCES

- [Cluster Handbook SY 2026-2027](#)
- [Career Ready Practices and CTE Course Competencies](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - Occupational Employment Demand \(formerly High Demand Occupations\)](#)
- [K-12 : Student Resources : U.S. Bureau of Labor Statistics \(bls.gov\)](#)
- [My Next Move](#)
- [O\\*NET OnLine \(onetonline.org\)](#)
- [Today's Occupations \(ks.gov\)](#)

## POSTSECONDARY CREDITS

Under the Excel in Career Technical Education Initiative, Kansas high school students qualify for state-funded college tuition in approved technical courses offered by Kansas technical and community colleges.

- [Excel in CTE Initiative \(kansasregents.org\)](#)
- [Tiered Technical Courses at Kansas Community and Technical Colleges \(ksde.org\)](#)

## POSTSECONDARY PROGRAMS

- [Kansas DegreeStats - Kansas Board of Regents \(ksdegreestats.org\)](#)
- [Degree Stats Lesson \(ksde.org\)](#)
- [K-TIP Report \(kansasregents.org\)](#)
- [Program Alignment \(kansasregents.org\)](#)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](#)

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- Manufacturing

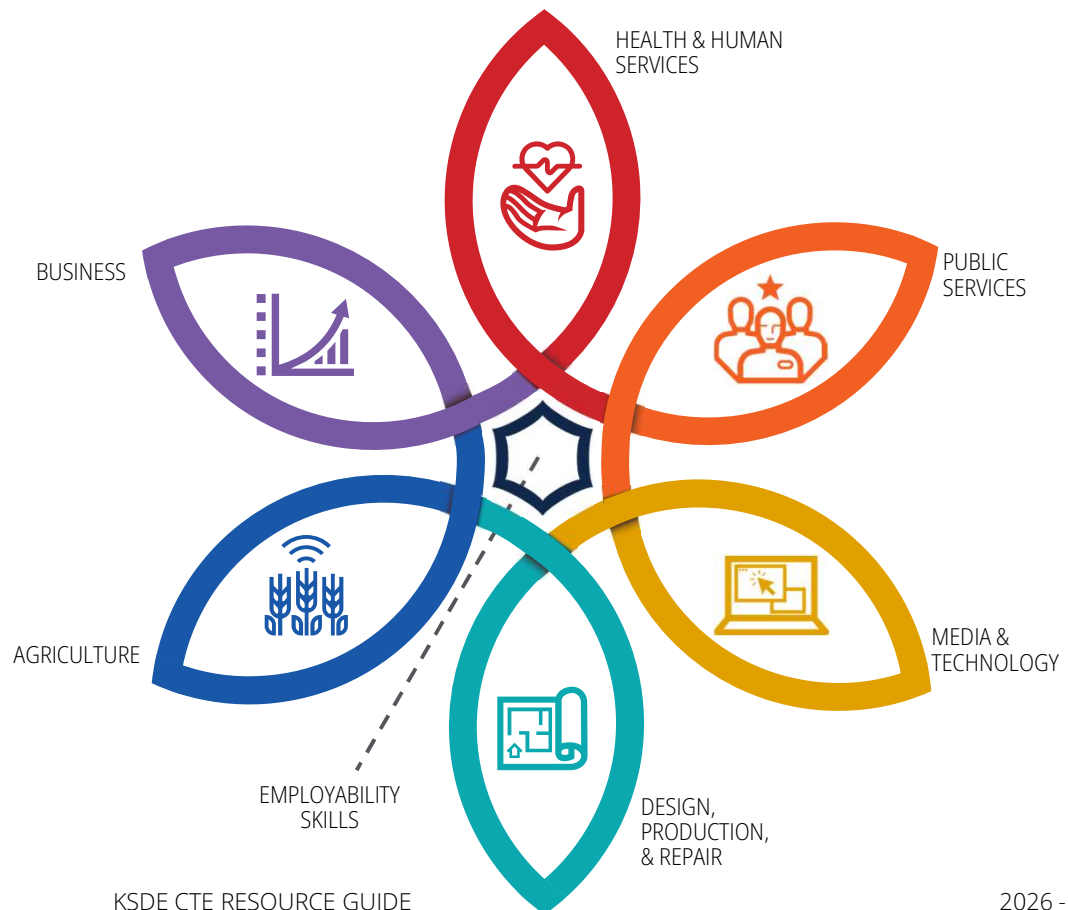
### Construction

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- Diversified Agricultural Science
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# Health & Human Services

| Healthcare & Human Services



## HEALTH & HUMAN SERVICES INDUSTRY

# Healthcare & Human Services

Family, Community & Consumer Services  
Health Science

*"Caring for Communities"*

## Occupation Overview

| Occupations & Degrees                                             | Median Annual Wage |
|-------------------------------------------------------------------|--------------------|
| <b>H.S. Diploma or Non-Degree Award</b>                           |                    |
| Home Health & Personal Care Aides                                 | \$29,190           |
| Nursing Assistants                                                | \$36,910           |
| Social & Human Service Assistants                                 | \$40,540           |
| Medical Secretaries & Administrative Assistants                   | \$39,540           |
| Medical Assistants                                                | \$39,090           |
| Pharmacy Technicians                                              | \$39,210           |
| <b>Associate's Degree</b>                                         |                    |
| *Physical Therapist Assistant                                     | \$63,010           |
| *Radiologic Technologies & Technicians                            | \$68,740           |
| *Occupational Therapy Assistants                                  | \$64,880           |
| *Licensed Practical & Vocational Nurses                           | \$59,920           |
| *Dental Hygienists                                                | \$82,060           |
| <b>H.S. Diploma &amp; Work Experience or Bachelor's Degree</b>    |                    |
| *Child, Family, & School Social Workers                           | \$48,950           |
| *Substance Abuse, Behavioral Disorder, & Mental Health Counselors | \$50,990           |
| <b>Bachelor's, Master's, or Doctoral/Professional Degree</b>      |                    |
| *Clinical Laboratory Technologists Technicians                    | \$60,470           |
| *Healthcare Social Workers                                        | \$64,280           |
| *Registered Nurses                                                | \$78,060           |
| *Medical & Health Services Managers                               | \$104,990          |
| *Nurse Practitioners                                              | \$124,690          |
| *Pharmacists                                                      | \$134,350          |

\* High Demand, High Wage  
Source: [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://www.kslc.org/career-posters)



# Family, Community & Consumer Services

## Pathway

### "Caring for Communities"

Family, Community and Consumer Service careers address the societal and environmental factors affecting the community, such as access to healthy foods, income and poverty, adequate childcare, and access to education. These careers are dedicated to mental and emotional well-being aimed at supporting individuals through mental health challenges and promoting psychological health. This field includes work in public services, social work and case management, or nonprofit sectors with missions to address social inequalities and provide support services for all age ranges.

#### INTRODUCTORY LEVEL COURSES

- Career & Life Planning

#### TECHNICAL LEVEL COURSES

- Culinary Essentials
- Nutrition and Dietetics
- Family Studies
- Leadership Service in Action
- Human Growth & Development (Early Years)

#### APPLICATION-LEVEL COURSES

- Workplace Experience in Human Services

#### OCCUPATIONS

- Child, Family, & School Social Workers
- Community & Social Services Specialist (All Other)
- Community Outreach Coordinator
- Counselors (All Other)
- Customer Service Representative
- Healthcare Social Workers
- Mental Health & Substance Abuse Social Workers
- Social & Community Service Managers
- Social & Human Service Assistants
- Social Workers (All Other)
- Substance Abuse, Behavioral Disorder, & Mental Health Counselors

Source:

[2025 Kansas Occupational Employment Demand](#)

| Occupations & Degrees                                             | Median Annual Wage |
|-------------------------------------------------------------------|--------------------|
| H.S. Diploma & Short to Moderate-Term On-the-Job Training         |                    |
| Social & Human Service Assistants                                 | \$40,540           |
| Bachelor's Degree                                                 |                    |
| *Child, Family, & School Social Workers                           | \$52,690           |
| *Substance Abuse, Behavioral Disorder, & Mental Health Counselors | \$57,760           |
| *Social & Community Service Managers                              | \$73,470           |
| Master's Degree & Internship/Residency                            |                    |
| *Healthcare Social Workers                                        | \$64,280           |
| *Social Workers, all other                                        | \$86,130           |
| * High Demand, High Wage                                          |                    |

Source:

[2025 Kansas Occupational Employment Demand](#)

#### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- AAFCS Pre-Pac: Broad Field Family & Consumer Sciences
- AAFCS Pre-Pac: Family & Community Services
- AAFCS Pre-Pac: Nutrition, Food & Wellness
- AAFCS Pre-Pac: Personal & Family Finances
- CareerSafe: OSHA Cyber Safety Awareness Training (Level 2)
- CareerSafe: OSHA Safety Certification (10 Hour)
- NC3: Data Analytics/Harnessing the Power of Data

#### POSTSECONDARY CREDITS

Under the Excel in Career Technical Education Initiative, Kansas high school students qualify for state-funded college tuition in approved technical courses offered by Kansas technical and community colleges.

- [Excel in CTE Initiative \(kansasregents.org\)](#)
- [Tiered Technical Courses \(ksde.org\)](#)

#### POSTSECONDARY PROGRAMS

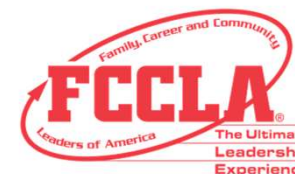
- [Kansas DegreeStats \(ksdegreestats.org\)](#)
- [Degree Stats Lesson \(ksde.org\)](#)
- [K-TIP Report \(kansasregents.org\)](#)
- [Program Alignment \(kansasregents.org\)](#)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](#)

#### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](#)
- [Human Services Career Cluster \(onetonline.org\)](#)
- [Careers in Human Services \(MyNextMove.org\)](#)
- [Human Services Advance CTE \(careertech.org\)](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)
- [Today's Occupations \(ks.gov\)](#)
- [Cool Careers: Mental Health Provider \(HirePaths.com\)](#)

#### STUDENT ORGANIZATION

- [Family, Community and Career Leaders of America \(FCCLA\)](#)





# Health Science

## Pathway

### INTRODUCTORY LEVEL COURSES

- Chemistry
- Introduction to Health Care

### TECHNICAL LEVEL COURSES

- Anatomy & Physiology
- Medical Terminology
- Nutrition & Dietetics

### APPLICATION-LEVEL COURSES

- Certified Nursing Assistant
- Health Care Work Experience I
- Health Care Work Experience II

### OCCUPATIONS

- Clinical Laboratory Technologists & Technicians
- Dental Assistants
- Dental Hygienists
- Diagnostic Medical Sonographers
- Health Technologists & Technicians (All Other)
- Home Health & Personal Care Aides
- Licensed Practical & Licensed Vocational Nurses
- Medical Assistants
- Medical Clinical Laboratory Technicians
- Medical & Health Services Managers
- Medical Records Specialists
- Medical Scientists (except Epidemiologists)
- Medical Secretaries & Administrative Assistants
- Nursing Assistants
- Nurse Practitioners
- Occupational Therapists
- Occupational Therapy Assistants
- Pharmacists
- Pharmacy Aides
- Pharmacy Technicians
- Phlebotomists
- Physical Therapist Assistants
- Physical Therapists
- Physician Assistants
- Physicians (All Other)
- Physician Assistants
- Psychiatric Technicians
- Radiologic Technologists & Technicians
- Respiratory Therapists
- Registered Nurses
- Speech-Language Pathologists
- Surgical Technologists
- Veterinary Technologists & Technicians

## "Caring for Communities"

This pathway focuses on the health professions and related clinical sciences. It includes planning, managing, and providing therapeutic services, diagnostic services, health informatics, and support services.

| Occupations & Degrees                             | Median Annual Wage |
|---------------------------------------------------|--------------------|
| <b>Postsecondary Nondegree Award</b>              |                    |
| Pharmacy Aides                                    | \$28,800           |
| Home Health & Personal Care Aides                 | \$29,190           |
| Nursing Assistants                                | \$36,910           |
| Psychiatric Technicians                           | \$37,700           |
| Medical Secretaries & Administrative Assistants   | \$39,540           |
| Medical Assistants                                | \$39,090           |
| Phlebotomists                                     | \$38,330           |
| Pharmacy Technicians                              | \$39,210           |
| Dental Assistants                                 | \$39,840           |
| * Medical Records Specialists                     | \$48,670           |
| * Health Technologists & Technicians (All Other)  | \$59,780           |
| * Surgical Technologists                          | \$57,580           |
| * Licensed Practical & Licensed Vocational Nurses | \$59,920           |
| <b>Associate's Degree</b>                         |                    |
| Veterinary Technologists & Technicians            | \$37,350           |
| * Physical Therapist Assistants                   | \$63,010           |
| * Radiologic Technologists & Technicians          | \$68,740           |
| * Occupational Therapy Assistants                 | \$64,880           |
| * Respiratory Therapists                          | \$73,580           |
| * Dental Hygienists                               | \$82,060           |
| * Diagnostic Medical Sonographers                 | \$88,170           |
| <b>Bachelor's Degree</b>                          |                    |
| * Clinical Laboratory Technologists & Technicians | \$60,470           |
| * Registered Nurses                               | \$78,060           |
| * Medical & Health Services Managers              | \$104,990          |
| <b>Master's Degree</b>                            |                    |
| * Speech-Language Pathologists                    | \$81,360           |
| * Occupational Therapists                         | \$97,000           |
| * Physician Assistants                            | \$124,440          |
| * Nurse Practitioners                             | \$124,690          |
| <b>Doctoral or Professional Degree</b>            |                    |
| * Physical Therapists                             | \$98,840           |
| * Pharmacists                                     | \$134,350          |
| * Physicians (All Other)                          | \$140,330          |

\* High Demand, High Wage

### Sources:

- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)

[Continued on next page](#) ➞



# Health Science

## Pathway (continued)

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- American Red Cross/American Heart Association: Advanced Life Support (ACLS/ALS)
- American Red Cross/American Heart Association: Automated External Defibrillator (AED)
- American Red Cross/American Heart Association: Basic Life Support (BLS)
- American Red Cross/American Heart Association: Cardiopulmonary Resuscitation (CPR)
- American Red Cross/American Heart Association: Cardiopulmonary Resuscitation (CPR) (Infant/ Child)
- American Red Cross / American Heart Association: First Aid
- American Red Cross/American Heart Association: Pediatric Advanced Life & Support (PALS)
- CareerSafe: OSHA Safety Certification (10 Hour)
- KS Dept. for Aging & Disability Services: Certified Medical Aide (CMA)
- KS Dept. for Aging & Disability Services: Home Health Aide
- KS Emergency Medical Services Association: Emergency Medical Responder (EMR) (First Responder)
- National Consortium for Health Science Education: National Health Science Assessment
- National Health Career Association/National Center for Competency Testing: American Medical Certification Association EKG/ECG/ECT Technician
- NC3: Data Analytics/Harnessing the Power of Data
- NHA/AMCA: Certified Patient Care Technician (CPCT/A)

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- KS Board of Pharmacy/Pharmacy Technician Certification Board: Pharmacy Technician
- KS Dental Board: Dental Assistant
- KS Dept. for Aging & Disability Services: Certified Nurse Aide (CNA)
- KS Emergency Medical Services Association: Emergency Medical Technician (EMT)
- National Health Career Association/American Society for Clinical Pathology/American Medical Certification Association: Phlebotomy Technician

### POSTSECONDARY CREDITS

Under the Excel in Career Technical Education Initiative, Kansas high school students qualify for state-funded college tuition in approved technical courses offered by Kansas technical and community colleges.

- [Excel in CTE Initiative \(kansasregents.org\)](https://kansasregents.org/excel-in-cte-initiative)
- [Tiered Technical Courses \(ksde.org\)](https://ksde.org/tiered-technical-courses)

### POSTSECONDARY PROGRAMS

- [Kansas DegreeStats \(ksdegreestats.org\)](https://ksdegreestats.org)
- [Degree Stats Lesson \(ksde.org\)](https://ksde.org/degree-stats-lesson)
- [K-TIP Report \(kansasregents.org\)](https://kansasregents.org/k-tip-report)
- [Program Alignment \(kansasregents.org\)](https://kansasregents.org/program-alignment)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](https://ksde.org/kansas-post-secondary-exploration-guide)

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://ksde.gov/common-career-technical-core-cte-course-competencies)
- [Health Science Career Cluster \(onetonline.org\)](https://onetonline.org/health-science-career-cluster)
- [Health Science Advance CTE \(careertech.org\)](https://careertech.org/health-science-advance-cte)
- [Careers in Health Science \(MyNextMove.org\)](https://mynextmove.org/careers-in-health-science)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ks.gov/kansas-labor-information-center-kllic-career-posters)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://ks.gov/kansas-labor-information-center-kllic-high-demand-occupations)
- [Today's Occupations \(ks.gov\)](https://ks.gov/todays-occupations)
- [Cool Careers: Registered Nurse \(HirePaths.com\)](https://hirepaths.com/registered-nurse)
- [Cool Careers: Medical Imaging Technician \(HirePaths.com\)](https://hirepaths.com/medical-imaging-technician)



# Public Services

| Public Service & Safety



## PUBLIC SERVICES INDUSTRY

# Public Service & Safety

Government & Public Administration

*"Caring for Communities"*

## Occupation Overview

| Occupations & Degrees                                                                                                      | Median Annual Wage |
|----------------------------------------------------------------------------------------------------------------------------|--------------------|
| <b>H.S. Diploma &amp; Short to Long-Term On-the-Job Training</b>                                                           |                    |
| Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers                                                  | \$24,960           |
| Security Guards                                                                                                            | \$36,090           |
| Public Safety Telecommunications                                                                                           | \$40,680           |
| Court, Municipal, and License Clerks                                                                                       | \$41,780           |
| Protective Service Workers, All Other                                                                                      | \$44,250           |
| *Postal Service Mail Carriers                                                                                              | \$56,330           |
| <b>H.S. Diploma &amp; Moderate-Term On-the-Job Training or Nondegree Award</b>                                             |                    |
| Correctional Officers and Jailers                                                                                          | \$46,080           |
| *Police and Sheriff's Patrol Officers                                                                                      | \$56,610           |
| *First-Line supervisors of police and detectives                                                                           | \$82,220           |
| <b>Postsecondary Nondegree Award or Long-Term On-the-Job Training</b>                                                      |                    |
| Emergency Medical Technicians                                                                                              | \$34,650           |
| Firefighters                                                                                                               | \$44,060           |
| <b>Associates Degree</b>                                                                                                   |                    |
| * Paralegals & Legal Assistants                                                                                            | \$48,910           |
| <b>Bachelor's Degree or Postsecondary Degree</b>                                                                           |                    |
| * Compliance Officers                                                                                                      | \$66,980           |
| * Lawyers                                                                                                                  | \$112,000          |
| * High Demand, High Wage                                                                                                   |                    |
| Source: <a href="https://www.kslc.org/career-posters">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a> |                    |



# Government & Public Administration

## Pathway

### "Caring for Communities"

This pathway prepares individuals to serve as managers in the executive arm of local, state, and federal government and focuses on the systematic study of executive organization and management. It includes instruction in the roles, development, and principles of public administration; the management of public policy; executive-legislative relations; public budgetary processes and financial management; administrative law; public personnel management; professional ethics; and research methods.

#### INTRODUCTORY LEVEL COURSES

- Career & Life Planning

#### TECHNICAL LEVEL COURSES

- Government Fundamentals
- Accounting
- Economics
- Government & Public Media Relations

#### APPLICATION-LEVEL COURSES

- Career Connections

#### OCCUPATIONS

- Compliance Officers
- Postal Service Mail Carriers
- Court, Municipal, & License Clerks
- File Clerks

| Occupations & Degrees                                 | Median Annual Wage |
|-------------------------------------------------------|--------------------|
| H.S. Diploma & Short to Long-Term On-the-Job Training |                    |
| Court, Municipal, & License Clerks                    | \$41,780           |
| File Clerks                                           | \$61,550           |
| Postal Service Mail Carriers                          | \$56,330           |
| Bachelor's Degree                                     |                    |
| Compliance Officers                                   | \$66,980           |

\* High Demand, High Wage

#### Sources:

- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)

#### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- NC3: Data Analytics/Harnessing the Power of Data

#### POSTSECONDARY CREDITS

Under the Excel in Career Technical Education Initiative, Kansas high school students qualify for state-funded college tuition in approved technical courses offered by Kansas technical and community colleges.

- [Excel in CTE Initiative \(kansasregents.org\)](#)
- [Tiered Technical Courses \(ksde.org\)](#)

#### POSTSECONDARY PROGRAMS

- [Kansas DegreeStats \(ksdegreestats.org\)](#)
- [Degree Stats Lesson \(ksde.org\)](#)
- [K-TIP Report \(kansasregents.org\)](#)
- [Program Alignment \(kansasregents.org\)](#)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](#)

#### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](#)
- [Government & Public Administration Career Cluster \(onetoonline.org\)](#)
- [Government & Public Administration Advance CTE \(careertech.org\)](#)
- [Careers in Government & Public Administration \(MyNextMove.org\)](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)
- [Today's Occupations \(ks.gov\)](#)
- [Kansas Mock Trial \(ksbar.org\)](#)



# Media & Technology

| Digital Technology



## MEDIA & TECHNOLOGY INDUSTRY

# Digital Technology

Media Design & Communications

*"Connecting and Supporting Success"*

## Occupation Overview

| Occupations & Degrees                                                                              | Median Annual Wage |
|----------------------------------------------------------------------------------------------------|--------------------|
| H.S. Diploma or Short-Term On-the-Job Training or Some College & Moderate-Term On-the-Job Training |                    |
| Receptionists & Information Clerks                                                                 | \$35,320           |
| *Computer User Support Specialist                                                                  | \$50,870           |
| Bachelor's Degree                                                                                  |                    |
| *Network & Computer Systems Administrators                                                         | \$82,150           |
| *Software Quality Assurance Analysts & Testers                                                     | \$83,070           |
| *Computer Programmers                                                                              | \$91,600           |
| *Computer Systems Analysts                                                                         | \$97,300           |
| *Software Developers                                                                               | \$106,660          |
| Bachelor's Degree & 5 Years or More Work Experience                                                |                    |
| *Computer Network Architects                                                                       | \$100,910          |
| *Computer & Information Systems Managers                                                           | \$154,830          |

\* High Demand, High Wage

Source: [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ks.gov/kLIC/CareerPosters)



# Media Design & Communications

## Pathway

### "Connecting and Supporting Success"

This pathway prepares individuals to apply HTML, XML, Javascript, graphics applications, and other authoring tools to the design, editing, and publishing (launching) of documents, images, graphics, sound, and multimedia products on the World Wide Web. It includes instruction in Internet theory, web page standards and policies, elements of web page design, user interfaces, vector tools, special effects, interactive and multimedia components, search engines, navigation, morphing, e-commerce tools, and emerging web technologies.

#### INTRODUCTORY LEVEL COURSES

- Drawing for Designers

#### TECHNICAL LEVEL COURSES

- Art 1 - Principles of Illustration
- Art 2 - Graphic Design I
- Art 3 - Graphic Design II
- Yearbook 1 - Journalism & Photo Imaging
- Audio/Video Production I
- Digital Media Technology

#### APPLICATION-LEVEL COURSES

- Art 4 - Applied Graphic Design
- Yearbook 2 - Media Design
- Yearbook 3 - Advanced Media Design
- Audio/Video Production II
- Graphic Design Workplace Experience

#### OCCUPATIONS

- Career/Technical Education Teachers (Postsecondary)
- Graphic Designers
- Librarians & Media Collections Specialists
- Special Effects Artists & Animators
- Web Developers
- Web & Digital Interface Designers

| Occupations & Degrees                       | Median Annual Wage |
|---------------------------------------------|--------------------|
| <b>Bachelor's Degree</b>                    |                    |
| *Graphic Designers                          | \$49,820           |
| <b>Master's Degree</b>                      |                    |
| *Librarians & Media Collections Specialists | \$59,580           |

\* High Demand, High Wage

#### Sources:

- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ksde.gov/career-posters)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://ksde.gov/high-demand-occupations)

#### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- Adobe: Dreamweaver
- Adobe: Frame Maker
- Adobe In-Design
- Adobe Photoshop
- Adobe Premier Pro
- Apple: App Development with Swift (Level 1)
- CareerSafe: OSHA Safety Certification (10 Hour)
- CISCO: CCDE
- CISCO: CCIE
- CISCO: CCNA
- CISCO: CCNP

#### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS (continued)

- Microsoft (MOS): Microsoft Office Specialist (Associate A)
- Microsoft (MOS): Microsoft Office Specialist (Expert A)
- Microsoft (MOS): Access
- Microsoft (MOS): Excel
- Microsoft (MOS): PowerPoint
- Microsoft (MOS): Word
- NC3: Data Analytics/Harnessing the Power of Data

#### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATION

- CompTIA: A+
- CompTIA: Network+
- CompTIA: Security+
- CompTIA: Server+

#### POSTSECONDARY CREDITS

Under the Excel in Career Technical Education Initiative, Kansas high school students qualify for state-funded college tuition in approved technical courses offered by Kansas technical and community colleges.

- [Excel in CTE Initiative \(kansasregents.org\)](https://ksde.gov/excel-initiative)
- [Tiered Technical Courses \(ksde.org\)](https://ksde.gov/tiered-technical-courses)

#### POSTSECONDARY PROGRAMS

- [Kansas DegreeStats \(ksdegreestats.org\)](https://ksde.gov/degree-stats)
- [Degree Stats Lesson \(ksde.org\)](https://ksde.gov/degree-stats-lesson)
- [K-TIP Report \(kansasregents.org\)](https://ksde.gov/k-tip-report)
- [Program Alignment \(kansasregents.org\)](https://ksde.gov/program-alignment)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](https://ksde.gov/kansas-post-secondary-exploration-guide)

#### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://ksde.gov/common-career-technical-core-cte-course-competencies)
- [Digital Technology Career Cluster \(onetonline.org\)](https://onetonline.org)
- [Digital Technology Advance CTE \(careertech.org\)](https://careertech.org)
- [Careers in Digital Technology \(MyNextMove.org\)](https://mynextmove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ksde.gov/kllic-career-posters)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://ksde.gov/kllic-high-demand-occupations)
- [Today's Occupations \(ks.gov\)](https://ksde.gov/todays-occupations)
- [Cool Careers: Cybersecurity Analyst \(HirePaths.com\)](https://hirepaths.com)



# Design, Production, & Repair

| Advanced Manufacturing  
| Construction



DESIGN, PRODUCTION, & REPAIR INDUSTRY

# Advanced Manufacturing

Engineering & Applied Mathematics  
Manufacturing

*"Building and Moving"*

## Occupation Overview

| Occupations & Degrees                                               | Median Annual Wage |
|---------------------------------------------------------------------|--------------------|
| <b>H.S. Diploma &amp; Moderate-Term On-the-Job Training</b>         |                    |
| Miscellaneous Assemblers and Fabricators                            | \$41,280           |
| Food Batchmakers                                                    | \$41,830           |
| Packaging and Filling Machine Operators and Tenders                 | \$43,030           |
| * Installation, Maintenance, and Repair Workers, All Other          | \$46,680           |
| * Mixing and Blending Machine Setters, Operators, and Tenders       | \$47,450           |
| * Computer Numerically Controlled Tool Operators                    | \$47,540           |
| * Weighers, Measurers, Checkers, and Samplers, Recordkeeping        | \$47,680           |
| * Welders, Cutters, Solderers, and Brazers                          | \$49,040           |
| * Inspectors, Testers, Sorters, Samplers, and Weighers              | \$55,930           |
| * Aircraft Structure, Surfaces, Rigging, and Systems Assemblers     | \$57,970           |
| <b>H.S. Diploma &amp; Long-Term On-the-Job Training</b>             |                    |
| * Machinists                                                        | \$48,490           |
| * Industrial Machinery Mechanics                                    | \$70,170           |
| * First-Line Supervisors of Production and Operating Workers        | \$72,500           |
| * First-Line Supervisors of Mechanics, Installers, and Repairers    | \$76,380           |
| <b>Associates Degree</b>                                            |                    |
| Electrical and Electronic Engineering Technologists and Technicians | \$73,060           |
| <b>Bachelor's Degree</b>                                            |                    |
| * Engineers, All Other                                              | \$69,210           |
| * Occupational Health and Safety Specialists                        | \$78,480           |
| * Mechanical Engineers                                              | \$91,770           |
| * Industrial Engineers                                              | \$96,650           |
| * Electrical Engineers                                              | \$97,680           |
| * Industrial Production Managers                                    | \$122,700          |
| * Aerospace Engineers                                               | \$126,640          |

\* High Demand, High Wage

Source: [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ks.gov/ksliic/career-posters)



# Engineering & Applied Mathematics

## Pathway

*"Building and Moving"*

This pathway generally prepares individuals to apply mathematical and scientific principles to solve a wide variety of practical problems in industry, social organization, public works, and commerce. It includes instruction in undifferentiated and individualized programs in engineering.

### INTRODUCTORY LEVEL COURSES

- Production Print Reading I
- Introduction to Engineering

### TECHNICAL LEVEL COURSES

- Foundations of Electronics
- Principles of Applied Engineering

### APPLICATION-LEVEL COURSES

- Engineering Design & Development
- Particular Topics in Engineering
- Emerging Technologies
- Workplace Experience in Engineering
- Project Management

### OCCUPATIONS

- Aerospace Engineers
- Electrical Engineers
- Engineering Teachers (Postsecondary)
- Engineers (All Other)
- Industrial Engineers
- Mechanical Engineers

| Occupations & Degrees    | Median Annual Wage |
|--------------------------|--------------------|
| <b>Bachelor's Degree</b> |                    |
| * Engineers (All Other)  | \$69,210           |
| * Mechanical Engineers   | \$91,770           |
| * Industrial Engineers   | \$96,650           |
| * Electrical Engineers   | \$97,680           |
| * Aerospace Engineers    | \$126,640          |

\* High Demand, High Wage

#### Sources:

- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- Autodesk: User, Professional, Specialist
- CareerSafe: OSHA Safety Certification (10 Hour)
- ISCT: Associate Level CET Exam
- ISCT: Electronics Systems Associate (ESA) Exam
- NC3: Data Analytics/Harnessing the Power of Data

### POSTSECONDARY CREDITS

Under the Excel in Career Technical Education Initiative, Kansas high school students qualify for state-funded college tuition in approved technical courses offered by Kansas technical and community colleges.

- [Excel in CTE Initiative \(kansasregents.org\)](#)
- [Tiered Technical Courses \(ksde.org\)](#)

### POSTSECONDARY PROGRAMS

- [Kansas DegreeStats \(ksdegreestats.org\)](#)
- [Degree Stats Lesson \(ksde.org\)](#)
- [K-TIP Report \(kansasregents.org\)](#)
- [Program Alignment \(kansasregents.org\)](#)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](#)

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](#)
- [Advanced Manufacturing Career Cluster \(onetonline.org\)](#)
- [Advanced Manufacturing Advance CTE \(careertech.org\)](#)
- [Careers in Advanced Manufacturing \(MyNextMove.org\)](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)
- [Today's Occupations \(ks.gov\)](#)
- [Cool Careers: Electrical Process Engineer \(HirePaths.com\)](#)
- [Cool Careers: Robotics and Automation Engineer \(HirePaths.com\)](#)
- [Cool Careers: Drone Pilot \(HirePaths.com\)](#)
- [International Society of Certified Electronics Technicians - Education Through Certification](#)

### STUDENT ORGANIZATION

- [Skills USA Kansas](#)



- [Technology Student Association](#)





# Manufacturing

## Pathway

### *“Building and Moving”*

This pathway generally prepares individuals to apply technical knowledge and skills in creating products using precision crafting and technical illustration. People with careers in Manufacturing work with machines, making or assembling electronic parts, constructing, performing welding jobs, or printing various materials.

#### INTRODUCTORY LEVEL COURSES

- Production Print Reading I
- Introduction to Skilled Trades

#### TECHNICAL LEVEL COURSES

- Welding Processes I
- Hand & Power Tools
- Production Print Reading II

#### APPLICATION-LEVEL COURSES

- Workplace Experience in Manufacturing
- Welding Processes II
- Advanced Materials & Fabrication

#### OCCUPATIONS

- Computer Numerically Controlled Tool Operators
- Electrical & Electronic Engineering Technologists & Technicians
- First-Line Supervisors of Production & Operating Workers
- Industrial Machinery Mechanics
- Industrial Production Managers
- Inspectors, Testers, Sorters, Samplers, & Weighers
- Installation, Maintenance, & Repair Workers (All Other)
- Machinists
- Mixing & Blending Machine Setters, Operators, & Tenders
- Occupational Health and Safety Specialists
- Sheet Metal Workers
- Welders, Cutters, Solderers, & Brazers

#### Occupations & Degrees

#### Median Annual Wage

##### H.S. Diploma & Short to Moderate-Term On-the-Job Training

|                                                             |          |
|-------------------------------------------------------------|----------|
| Miscellaneous Assemblers & Fabricators                      | \$41,280 |
| Packaging & Filling Machine Operators & Tenders             | \$43,030 |
| * Installation, Maintenance, and Repair Workers (All Other) | \$46,680 |
| * Mixing & Blending Machine Setters, Operators, & Tenders   | \$47,450 |
| * Computer Numerically Controlled Tool Operators            | \$47,540 |
| Weighers, Measurers, Checkers, & Samplers, Recordkeeping    | \$47,680 |
| * Machinists                                                | \$48,490 |
| * Welders, Cutters, Solderers, & Brazers                    | \$49,040 |
| * Sheet Metal Workers                                       | \$50,920 |
| * Inspectors, Testers, Sorters, Samplers, & Weighers        | \$55,930 |
| * Industrial Machinery Mechanics                            | \$70,170 |
| * First-Line Supervisors of Production & Operating Workers  | \$70,500 |

##### Associate's Degree

|                                                                   |          |
|-------------------------------------------------------------------|----------|
| * Electrical & Electronic Engineering Technologists & Technicians | \$73,060 |
|-------------------------------------------------------------------|----------|

##### Bachelor's Degree

|                                            |           |
|--------------------------------------------|-----------|
| * Occupational Health & Safety Specialists | \$78,480  |
| * Industrial Production Managers           | \$122,700 |

\* High Demand, High Wage

#### Sources:

- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) – High Demand Occupations \(ks.gov\)](#)

[Continued on next page](#) ➞



# Manufacturing

## Pathway (continued)

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- AHRI: HVAC Certifications
- American Design Drafting Association (ADDA): Certified Drafter
- American Welding Society: SENSE Certification (Level 1)
- CareerSafe: OSHA Safety Certification (10 Hour)
- EPA: Section 608 - Handling & Buying Refrigerants
- IS CET: Associate Level CET Exam
- IS CET: Electronics Systems Associate (ESA) Exam
- MSSC: Certified Production Technician (CPT)
- NC3: Data Analytics/Harnessing the Power of Data
- NCCER: Core & Sheet Metal Level 1
- NIMS: Metal Forming I

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- ASME: Section 9 Standards (6G level)
- American Welding Society: Certification (Level 1)
- HVAC Excellence: Core & Air Conditioning, Gas Heat & Electrical
- HVAC Excellence: Core & Light Commercial Air Conditioning, Gas Heat & Electrical
- HVAC Excellence: Core & Light Commercial Refrigeration & Electrical
- ICE: Core & Commercial Refrigeration
- ICE: Core & Light Commercial Air Conditioning & Heating
- ICE: Core & Residential Air Conditioning & Heating
- NATE: Core & Air Conditioning
- NATE: Core & Air Distribution
- NATE: Core & Air to Air Heat Pumps
- NATE: Core & Gas or Oil Furnaces
- NATE: Core & Light Commercial/Commercial Refrigeration
- NCCER: Core & Electrical Level 1
- NCCER: Core & HVAC Levels 1 & 2
- NCCER: Core & Industrial Maintenance Level 1
- NCCER: Core & Plumbing & Pipefitting Level 1
- NIMS: Machining Level 1
- SMRP: Certified Maintenance & Reliability Technician

### POSTSECONDARY CREDITS

Under the Excel in Career Technical Education Initiative, Kansas high school students qualify for state-funded college tuition in approved technical courses offered by Kansas technical and community colleges.

- [Excel in CTE Initiative \(kansasregents.org\)](https://kansasregents.org)
- [Tiered Technical Courses \(ksde.org\)](https://ksde.org)

### POSTSECONDARY PROGRAMS

- [Kansas DegreeStats \(ksdegreestats.org\)](https://ksdegreestats.org)
- [Degree Stats Lesson \(ksde.org\)](https://ksde.org)
- [K-TIP Report \(kansasregents.org\)](https://kansasregents.org)
- [Program Alignment \(kansasregents.org\)](https://kansasregents.org)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](https://ksde.org)

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://ksde.gov)
- [Advanced Manufacturing Career Cluster \(onetoonline.org\)](https://onetoonline.org)
- [Advanced Manufacturing Advance CTE \(careertech.org\)](https://careertech.org)
- [Careers in Advanced Manufacturing \(MyNextMove.org\)](https://MyNextMove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ks.gov)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://ks.gov)
- [Today's Occupations \(ks.gov\)](https://ks.gov)
- [Sheet Metal Mechanic \(HirePaths.com\)](https://hirepaths.com)
- [International Society of Certified Electronics Technicians \(ISCET\)](https://iscet.org)
- [National Center for Construction Education & Research - NCCER](https://nccer.org)
- [AWS SENSE Program \(senseonline.org\)](https://senseonline.org)

### STUDENT ORGANIZATION

- [Skills USA Kansas](https://skillsusa.org)



- [Technology Student Association](https://tstudent.org)





DESIGN, PRODUCTION, & REPAIR INDUSTRY

# Construction

Construction & Design

*"Building and Moving"*

## Occupation Overview

| Occupations & Degrees                                                     | Median Annual Wage |
|---------------------------------------------------------------------------|--------------------|
| <b>H.S. Diploma &amp; Short to Long-Term On-the-Job Training</b>          |                    |
| Cabinetmakers and Bench Carpenters                                        | \$38,800           |
| Construction Laborers                                                     | \$44,810           |
| Painters, Construction and Maintenance                                    | \$44,890           |
| Highway Maintenance Workers                                               | \$45,170           |
| Maintenance and Repair Workers, General                                   | \$46,590           |
| Operating Engineers and Other Construction<br>*Equipment Operators        | \$50,600           |
| *Cement Masons and Concrete Finishers                                     | \$50,640           |
| *Construction and Building Inspectors                                     | \$61,850           |
| <b>H.S. Diploma &amp; Apprenticeship</b>                                  |                    |
| *Sheet Metal Workers                                                      | \$50,920           |
| *Carpenters                                                               | \$51,550           |
| *Electricians                                                             | \$61,830           |
| *Plumbers, Pipefitters, and Steamfitters                                  | \$62,820           |
| First-Line Supervisors of Construction Trades<br>*and Extraction Workers  | \$75,730           |
| <b>Postsecondary Nondegree Award or Long-Term On-the-Job Training</b>     |                    |
| Heating, Air Conditioning, and Refrigeration<br>*Mechanics and Installers | \$56,750           |
| <b>Associates Degree</b>                                                  |                    |
| Civil Engineering Technologists and<br>*Technicians                       | \$58,700           |
| <b>Bachelor's Degree or Postsecondary Degree</b>                          |                    |
| *Civil Engineers                                                          | \$86,780           |
| *Cost Estimators                                                          | \$72,600           |
| *Construction Managers                                                    | \$103,760          |
| *Architectural and Engineering Managers                                   | \$147,020          |

\* High Demand, High Wage

Source: [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ks.gov)



# Construction & Design

## Pathway

Careers emphasizing the critical initial stages of construction and development projects, including preconstruction activities, property development, and land use planning. Careers focused on skilled work that is essential to constructing, maintaining, and repairing buildings and infrastructure including carpentry; welding; masonry; electrical; plumbing; and heating, ventilation, air conditioning, and refrigeration (HVAC-R).

### INTRODUCTORY LEVEL COURSES

- Production Print Reading I
- Introduction to Skilled Trades

### TECHNICAL LEVEL COURSES

- Woodworking Principles

### APPLICATION-LEVEL COURSES

- Workplace Experience in Construction
- Advanced Materials & Fabrications

### OCCUPATIONS

- Architectural & Engineering Managers
- Carpenters
- Cement Masons & Concrete Finishers
- Civil Engineering Technologists and Technicians
- Civil Engineers
- Construction & Building Inspectors
- Construction Managers
- Cost Estimators
- Electricians
- First-Line Supervisors of Construction Trades & Extraction Workers
- Heating, Air Conditioning, & Refrigeration Mechanics & Installers
- Operating Engineers & Other Construction Equipment Operators
- Plumbers, Pipefitters, & Steamfitters
- Sheet Metal Workers

| Occupations & Degrees                                                                                           | Median Annual Wage |
|-----------------------------------------------------------------------------------------------------------------|--------------------|
| <b>H.S. Diploma &amp; Short to Long-Term On-the-Job Training</b>                                                |                    |
| Cabinetmakers and Bench Carpenters                                                                              | \$38,800           |
| Construction Laborers                                                                                           | \$44,810           |
| Painters, Construction and Maintenance                                                                          | \$44,890           |
| Highway Maintenance Workers                                                                                     | \$45,170           |
| Maintenance and Repair Workers, General                                                                         | \$46,590           |
| Operating Engineers and Other Construction                                                                      |                    |
| *Equipment Operators                                                                                            | \$50,600           |
| *Cement Masons and Concrete Finishers                                                                           | \$50,640           |
| *Construction and Building Inspectors                                                                           | \$61,850           |
| <b>H.S. Diploma &amp; Apprenticeship</b>                                                                        |                    |
| *Sheet Metal Workers                                                                                            | \$50,920           |
| *Carpenters                                                                                                     | \$51,550           |
| *Electricians                                                                                                   | \$61,830           |
| *Plumbers, Pipefitters, and Steamfitters                                                                        | \$62,820           |
| First-Line Supervisors of Construction Trades and                                                               |                    |
| *Extraction Workers                                                                                             | \$75,730           |
| <b>Postsecondary Nondegree Award or Long-Term On-the-Job Training</b>                                           |                    |
| Heating, Air Conditioning, and Refrigeration                                                                    |                    |
| *Mechanics and Installers                                                                                       | \$56,750           |
| <b>Associates Degree</b>                                                                                        |                    |
| *Civil Engineering Technologists and Technicians                                                                | \$58,700           |
| <b>Bachelor's Degree or Postsecondary Degree</b>                                                                |                    |
| *Civil Engineers                                                                                                | \$86,780           |
| *Cost Estimators                                                                                                | \$72,600           |
| *Construction Managers                                                                                          | \$103,760          |
| *Architectural and Engineering Managers                                                                         | \$147,020          |
| * High Demand, High Wage                                                                                        |                    |
| Source: <a href="https://www.ks.gov/kLIC/">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a> |                    |

[Continued on next page](#)



# Construction & Design

## Pathway (continued)

*"Building and Moving"*

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- AHRI: Variety of HVAC Related Areas
- American Design Drafting Association: Certified Drafter
- Autodesk: User, Professional, Specialist
- CareerSafe: OSHA Safety Certification (10 Hour)
- EPA: Section 608 - Handling & Buying Refrigerants
- International Code Council: Building Construction
- NC3: Data Analytics/Harnessing the Power of Data
- NCCER: Core & Carpentry Level 2
- NCCER: Core & Concrete Finishing
- NCCER: Core & Construction Laborer
- NCCER: Core & Masonry Level 1
- NCCER: Core & Sheet Metal Level 1
- Solid Works: Software

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- HVAC Excellence: Core & Air Conditioning, Gas, Heat & Electrical
- HVAC Excellence: Core & Light Commercial Air Conditioning, Gas Heat & Electrical
- HVAC Excellence: Core & Light Commercial Refrigeration & Electrical
- ICE: Core & Commercial Refrigeration
- ICE: Core & Light Commercial Air Conditioning & Heating
- ICE: Core & Residential Air Conditioning & Heating
- NATE: Core & Air Conditioning
- NATE: Core & Air Distribution
- NATE: Core & Air to Air Heat Pumps
- NATE: Core & Gas or Oil Furnaces
- NATE: Core & Light Commercial/Commercial Refrigeration
- NCCER: Core & Carpentry Level 1
- NCCER: Core & Electrical Level 1
- NCCER: Core & HVAC Levels 1 & 2
- NCCER: Core & Plumbing & Pipefitting Level 1

### POSTSECONDARY CREDITS

Under the Excel in Career Technical Education Initiative, Kansas high school students qualify for state-funded college tuition in approved technical courses offered by Kansas technical and community colleges.

- [Excel in CTE Initiative \(kansasregents.org\)](https://kansasregents.org)
- [Tiered Technical Courses \(ksde.org\)](https://ksde.org)

### POSTSECONDARY PROGRAMS

- [Kansas DegreeStats \(ksdegreestats.org\)](https://ksdegreestats.org)
- [Degree Stats Lesson \(ksde.org\)](https://ksde.org)
- [K-TIP Report \(kansasregents.org\)](https://kansasregents.org)
- [Program Alignment \(kansasregents.org\)](https://kansasregents.org)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](https://ksde.org)

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://ksde.gov)
- [Architecture & Construction Career Cluster \(onetoonline.org\)](https://onetoonline.org)
- [Architecture & Construction Advance CTE \(careertech.org\)](https://careertech.org)
- [Careers in Architecture & Construction \(MyNextMove.org\)](https://mynextmove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ks.gov)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://ks.gov)
- [Today's Occupations \(ks.gov\)](https://ks.gov)
- [Cool Careers: Carpenter \(HirePaths.com\)](https://hirepaths.com)
- [Cool Careers: Welder \(HirePaths.com\)](https://hirepaths.com)
- [Cool Careers: Plumber \(HirePaths.com\)](https://hirepaths.com)
- [National Center for Construction Education & Research - NCCER](https://nccer.org)

### STUDENT ORGANIZATION

- [Skills USA Kansas](https://skillsusa.org)



- [Technology Student Association](https://tstudent.org)





# Agriculture

| Agriculture



## AGRICULTURE INDUSTRY

# Agriculture

Animal Science, Health & Related Industries  
Diversified Agricultural Science  
Plant Science & Industry Operations

*"Cultivating Resources"*

## Occupation Overview

| Occupations & Degrees                                                          | Median Annual Wage |
|--------------------------------------------------------------------------------|--------------------|
| Short-Term On-the-Job Training                                                 |                    |
| Animal Caretakers                                                              | \$27,970           |
| Farmworkers, Farm, Ranch, & Aquacultural Animals                               | \$36,940           |
| Farmworkers & Laborers, Crop, Nursery, & Greenhouse                            | \$33,530           |
| Landscaping & Groundskeeping Workers                                           | \$37,790           |
| Meat, Poultry, and Fish Cutters & Trimmers                                     | \$46,020           |
| *Slaughterers & Meat Packers                                                   | \$47,310           |
| Veterinary Assistants & Laboratory Animal Caretakers                           | \$32,670           |
| Moderate to Long-Term On-the-Job Training                                      |                    |
| Butchers & Meat Cutters                                                        | \$35,800           |
| *Farm Equipment Mechanics & Service Technicians                                | \$49,450           |
| Agricultural Equipment Operators                                               | \$44,510           |
| Bachelor's Degree or H.S. Diploma & Work Experience                            |                    |
| Veterinary Technologists & Technicians                                         | \$39,070           |
| *First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers | \$58,440           |
| *Farmers, Ranchers, & Other Agricultural Managers                              | \$79,280           |

\* High Demand, High Wage

Source: [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ks.gov/kLIC/)



# Animal Science, Health & Related Industries

## Pathway

## "Cultivating Resources"

Careers that both promote the health and well-being of animals, including companion, livestock, and exotic animals, and facilitate the efficient production of animal-related products within the food system. For livestock and poultry, professionals in this field aim to optimize the production of meat, dairy, eggs, and other animal products. Careers in this field also include veterinary and other services to manage the care, breeding, behavior, enrichment, and management of animals. This Pathway also incorporates genetics, nutrition, biotechnology, and pharmaceuticals to improve animal welfare and production efficiency.

### INTRODUCTORY LEVEL COURSES

- Agriculture Explorations I

### TECHNICAL LEVEL COURSES

- Agriscience
- Animal Science

### APPLICATION-LEVEL COURSES

- Agricultural Internship
- Advanced Animal Science
- Agribusiness Management
- Agricultural Leadership

### OCCUPATIONS

- Animal Caretakers
- Farmworkers, Farm, Ranch, & Aquacultural Animals
- Farmers, Ranchers, & Other Agricultural Managers
- Veterinary Assistants & Laboratory Animal Caretakers
- Veterinary Technologists & Technicians

| Occupations & Degrees                                          | Median Annual Wage |
|----------------------------------------------------------------|--------------------|
| <b>H.S. Diploma &amp; Short-Term On-the-Job Training</b>       |                    |
| Animal Caretakers                                              | \$27,970           |
| Farmworkers, Farm, Ranch, & Aquacultural Animals               | \$36,940           |
| Veterinary Assistants & Laboratory Animal Caretakers           | \$32,670           |
| <b>Bachelor's Degree or H.S. Diploma &amp; Work Experience</b> |                    |
| Veterinary Technologists & Technicians                         | \$39,070           |
| *Farmers, Ranchers, & Other Agricultural Managers              | \$79,280           |

### Sources:

- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ksde.gov/career-posters)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://ksde.gov/high-demand-occupations)

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- CareerSafe: OSHA Safety Certification (10 Hour)
- cPass: Comprehensive Agriculture Assessment
- Dog Handler
- NC3: Data Analytics/Harnessing the Power of Data
- Youth for the Quality Care of Animals: YQCA

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- [KS Dept. of Agriculture: KS Agriculture Skills & Competencies](https://ksde.gov/ks-agriculture-skills-competencies)

### POSTSECONDARY CREDITS

Under the Excel in Career Technical Education Initiative, Kansas high school students qualify for state-funded college tuition in approved technical courses offered by Kansas technical and community colleges.

- [Excel in CTE Initiative \(kansasregents.org\)](https://ksde.gov/excel-in-cte)
- [Tiered Technical Courses \(ksde.org\)](https://ksde.gov/tiered-technical-courses)

### POSTSECONDARY PROGRAMS

- [Kansas DegreeStats \(ksdegreestats.org\)](https://ksde.gov/ks-degree-stats)
- [Degree Stats Lesson \(ksde.org\)](https://ksde.gov/degree-stats-lesson)
- [K-TIP Report \(kansasregents.org\)](https://ksde.gov/k-tip-report)
- [Program Alignment \(kansasregents.org\)](https://ksde.gov/program-alignment)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](https://ksde.gov/kansas-post-secondary-exploration-guide)

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://ksde.gov/common-career-technical-core-cte-course-competencies)
- [Agriculture Career Cluster \(onetonline.org\)](https://onetonline.org)
- [Agriculture Advance CTE \(careertech.org\)](https://careertech.org)
- [Careers in Agriculture \(MyNextMove.org\)](https://mynextmove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ksde.gov/kllic-career-posters)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://ksde.gov/kllic-high-demand-occupations)
- [Today's Occupations \(ks.gov\)](https://ksde.gov/todays-occupations)

### STUDENT ORGANIZATION

- [Kansas FFA](https://ksde.gov/kansas-ffa)
- [KS State FFA Degree \(Ag Ed Student Certification & Recognition\)](https://ksde.gov/ks-state-ffa-degree)
- [Supervised Agricultural Experience Grants & Student Scholarships](https://ksde.gov/supervised-agricultural-experience-grants)
- [Career & Leadership Development Events \(Career & Workforce Readiness Experiences\)](https://ksde.gov/career-leadership-development-events)
- [Kansas State Fair Exhibits & Student Showcases](https://ksde.gov/kansas-state-fair-exhibits)
- [Kansas State FFA Convention](https://ksde.gov/kansas-state-ffa-convention)



# Diversified Agricultural Science

## Pathway



## "Cultivating Resources"

This pathway focuses on the general principles and practice of agricultural research and production and that may prepare individuals to apply this knowledge to the solution of practical agricultural problems. It includes instruction in basic animal, plant, and soil science; animal husbandry and plant cultivation; soil conservation; and agricultural operations such as farming, ranching, and agricultural business.

### INTRODUCTORY LEVEL COURSES

- Agriculture Explorations I

### TECHNICAL LEVEL COURSES

- Agriscience
- Plant & Soil Science
- Animal Science
- Welding Processes I

### APPLICATION-LEVEL COURSES

- Agricultural Internship
- Agribusiness Management
- Agricultural Leadership

### OCCUPATIONS

- Agricultural Sciences Teachers (Postsecondary)
- Farmworkers, Farm, Ranch, & Aquacultural Animals

### OCCUPATIONS(Continued)

- Slaughters & Meat Packers
- Farm Equipment Mechanics & Service Technicians
- First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers

| Occupations & Degrees                                                                                                                                                                                                                                                                                      | Median Annual Wage |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| H.S. Diploma & Short-Term On-the-job Training                                                                                                                                                                                                                                                              |                    |
| Farmworkers, Farm, Ranch, & Aquacultural Animals                                                                                                                                                                                                                                                           | \$36, 940          |
| * Slaughtering & Meat Packers                                                                                                                                                                                                                                                                              | \$47,310           |
| H.S. Diploma & Moderate to Long-Term On-the-job Training                                                                                                                                                                                                                                                   |                    |
| * Farm Equipment Mechanics & Service Technicians                                                                                                                                                                                                                                                           | \$49,450           |
| Bachelor's Degree or H.S. Diploma & Work Experience                                                                                                                                                                                                                                                        |                    |
| * First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers                                                                                                                                                                                                                            | \$58,440           |
| * Farmers, Ranchers, & Other Agricultural Managers                                                                                                                                                                                                                                                         | \$79,280           |
| Sources:                                                                                                                                                                                                                                                                                                   |                    |
| <ul style="list-style-type: none"> <li>• <a href="https://ks.gov/career-posters">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a></li> <li>• <a href="https://ks.gov/high-demand-occupations">Kansas Labor Information Center (KLIC) - High Demand Occupations (ks.gov)</a></li> </ul> |                    |

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- CareerSafe: OSHA Safety Certification (10 Hour)
- cPass: Comprehensive Agriculture Assessment
- KS Livestock Association: Beef Quality Assurance
- KS Restaurant & Hospitality: ServSafe (Food Handlers)
- NC3: Data Analytics/Harnessing the Power of Data
- NSTMOP: Tractor Safety

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- [KS Dept. of Agriculture: KS Agriculture Skills & Competencies](https://ksde.gov/ksagriculture-skills-competencies)
- KS Dept. of Agriculture: Pesticide Applicator (Personal or Commercial)
- KS Dept. of Revenue: Commercial Driver's License

### POSTSECONDARY CREDITS

Under the Excel in Career Technical Education Initiative, Kansas high school students qualify for state-funded college tuition in approved technical courses offered by Kansas technical and community colleges.

- [Excel in CTE Initiative \(kansasregents.org\)](https://kansasregents.org/excel-cte-initiative)
- [Tiered Technical Courses \(ksde.org\)](https://ksde.org/tiered-technical-courses)

### POSTSECONDARY PROGRAMS

- [Kansas DegreeStats \(ksdegreestats.org\)](https://ksdegreestats.org)
- [Degree Stats Lesson \(ksde.org\)](https://ksde.org/degree-stats-lesson)
- [K-TIP Report \(kansasregents.org\)](https://kansasregents.org/k-tip-report)
- [Program Alignment \(kansasregents.org\)](https://kansasregents.org/program-alignment)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](https://ksde.org/kansas-post-secondary-exploration-guide)

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://ksde.gov/common-career-technical-core-cte-course-competencies)
- [Agriculture Career Cluster \(onetoonline.org\)](https://onetoonline.org)
- [Agriculture Advance CTE \(careertech.org\)](https://careertech.org)
- [Careers in Agriculture \(MyNextMove.org\)](https://mynextmove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ks.gov/kansas-labor-information-center-kllic-career-posters)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://ks.gov/kansas-labor-information-center-kllic-high-demand-occupations)
- [Today's Occupations \(ks.gov\)](https://ks.gov/todays-occupations)

### STUDENT ORGANIZATION

- [Kansas FFA](https://ksde.gov/kansas-ffa)
- [KS State FFA Degree \(Ag Ed Student Certification & Recognition\)](https://ksde.gov/ks-state-ffa-degree-ag-ed-student-certification-recognition)
- [Supervised Agricultural Experience Grants & Student Scholarships](https://ksde.gov/supervised-agricultural-experience-grants-student-scholarships)
- [Career & Leadership Development Events \(Career & Workforce Readiness Experiences\)](https://ksde.gov/career-leadership-development-events-career-workforce-readiness-experiences)
- [Kansas State Fair Exhibits & Student Showcases](https://ksde.gov/kansas-state-fair-exhibits-student-showcases)
- [Kansas State FFA Convention](https://ksde.gov/kansas-state-ffa-convention)





# Plant Science & Industry Operations Pathway

## "Cultivating Resources"

Careers involving the study and management of plant growth, soil health, and pest management, focusing on sustainable crop production for both food, goods and landscapes. This Pathway includes careers in agronomy, horticulture, timber and plant fiber harvesting, and soil science that are aimed at enhancing crop yields, preserving soil resources, developing advanced production practices, and enhancing landscape features.

### INTRODUCTORY LEVEL COURSES

- Agriculture Explorations I
- **TECHNICAL LEVEL COURSES**
- Agriscience
- Plant & Soil Science

### APPLICATION-LEVEL COURSES

- Agricultural Internship
- Advanced Agricultural Internship
- Greenhouse Management
- Agricultural Leadership
- Agribusiness Management

### OCCUPATIONS

- Farmworkers & Laborers, Crop, Nursery, & Greenhouse
- Landscaping & Groundskeeping Workers
- First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers
- Farmers, Ranchers, & Other Agricultural Managers

| Occupations & Degrees                                                           | Median Annual Wage |
|---------------------------------------------------------------------------------|--------------------|
| <b>H.S. Diploma and Short to Long-Term On-the-Job Training</b>                  |                    |
| Farmworkers & Laborers, Crop, Nursery, & Greenhouse                             | \$33,530           |
| Landscaping & Groundskeeping Workers                                            | \$37,790           |
| * First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers | \$58,440           |
| * Farmers, Ranchers, & Other Agricultural Managers                              | \$79,280           |

\* High Demand, High Wage

### Sources:

- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ks.gov/education/career-technical/industry-operations)

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- CareerSafe: OSHA Safety Certification (10 Hour)
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- [Tiered Technical Courses \(ksde.org\)](https://ksde.org/tiered-technical-courses)

### POSTSECONDARY PROGRAMS

- [Kansas DegreeStats \(ksdegreestats.org\)](https://ksdegreestats.org)
- [Degree Stats Lesson \(ksde.org\)](https://ksde.org/degree-stats-lesson)
- [K-TIP Report \(kansasregents.org\)](https://kansasregents.org/k-tip-report)
- [Program Alignment \(kansasregents.org\)](https://kansasregents.org/program-alignment)
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](https://ksde.org/kansas-post-secondary-exploration-guide)

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://ksde.org/education/career-technical/industry-operations)
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- [Agriculture Advance CTE \(careertech.org\)](https://careertech.org)
- [Careers in Agriculture \(MyNextMove.org\)](https://mynextmove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://ks.gov/education/career-technical/industry-operations)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://ks.gov/education/career-technical/industry-operations)
- [Today's Occupations \(ks.gov\)](https://ks.gov/education/career-technical/industry-operations)

### STUDENT ORGANIZATION

- [Kansas FFA](https://ksffa.org)
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- [Kansas State FFA Convention](https://ksffa.org)





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## SUCCESS DEFINED

A successful Kansas high school graduate has the

- Academic preparation,
- Cognitive preparation,
- Technical skills,
- Employability skills and
- Civic engagement

to be successful in postsecondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remediation.

## OUTCOMES

- Social-emotional growth
- Kindergarten readiness
- Individual Plan of Study
- Civic engagement
- Academically prepared for postsecondary
- High school graduation
- Postsecondary success

# Kansas State Board of Education

## Board Members

### DISTRICT 1



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### DISTRICT 10



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## MISSION

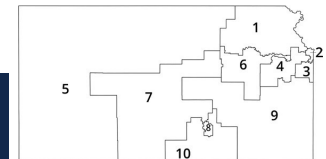
To prepare Kansas students for lifelong success through rigorous, quality academic instruction, career training and character development according to each student's gifts and talents.

## VISION

Kansas leads the world in the success of each student.

## MOTTO

Kansans Can



### COMMISSIONER OF EDUCATION



Dr. Randy Watson  
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### DEPUTY COMMISSIONER Division of Fiscal & Administrative Services



Dr. Frank Harwood  
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### DEPUTY COMMISSIONER Division of Learning Services



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*Kansas leads the world in the success of each student.*

July 1, 2025

