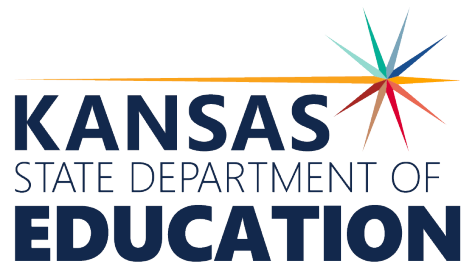


# 2025 – 2026 KSDE CTE Resource Guide



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

# 2025 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 seven 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 15 broad career clusters. Additionally, 32 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

- [2025-2026 Career Cluster Handbook](#)
- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)
- [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.

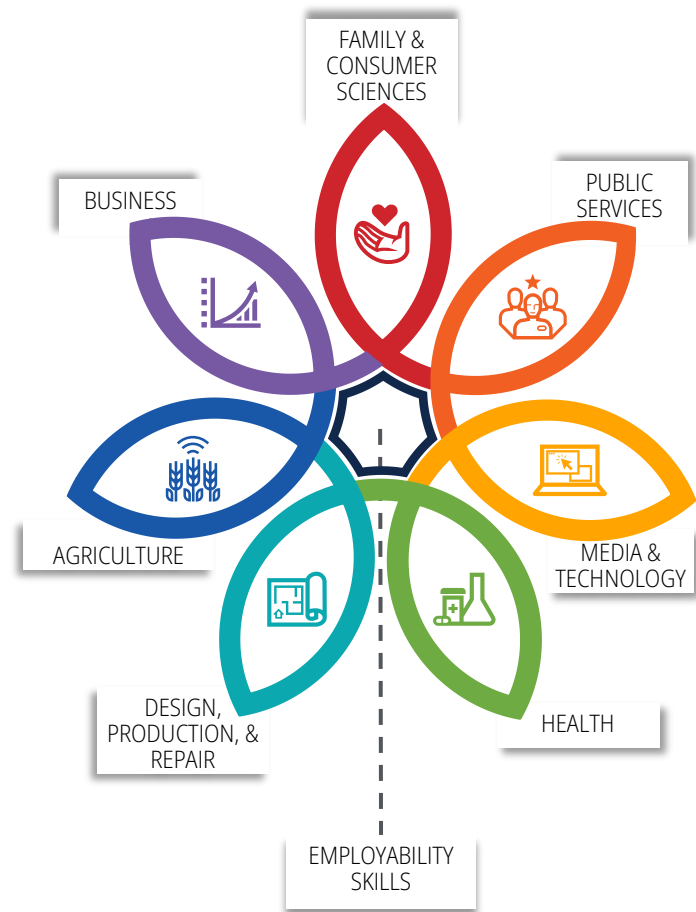
- [Excel in CTE Initiative \(kansasregents.org\)](#)
- [Tiered Technical Courses at Kansas Community and Technical Colleges \(ksde.org\)](#)

## 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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# Family & Consumer Sciences

| Hospitality & Tourism

| Human Services



## FAMILY & CONSUMER SCIENCES INDUSTRY

# Hospitality & Tourism

Restaurant & Event Management  
Travel & Tourism

## Occupation Overview

Occupations & Degrees	Median Annual Wage
Short-Term On-the-Job Training	
Fast Food & Counter Workers	\$26,580
Food Preparation Workers	\$28,790
Waiters & Waitresses	\$30,520
Janitors & Cleaners <i>(except Maids &amp; Housekeeping Cleaners)</i>	\$30,380
H.S. Diploma or Moderate-Term On-the-Job Training	
Hotel, Motel, & Resort Desk Clerks	\$27,850
Bakers	\$30,800
Cooks, Restaurant	\$32,310
H.S. Diploma & Work Experience	
*First-Line Supervisors of Housekeeping & Janitorial Workers	\$45,910
*Chefs & Head Cooks	\$53,760
*Food Service Managers	\$63,030

\* High Demand, High Wage

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



# Restaurant & Event Management

## Pathway

This pathway prepares individuals to plan, supervise, and manage food and beverage preparation and service operations, restaurant facilities, and catering services. It includes instruction in the food and beverage industry operations, cost control, purchasing and storage, business administration, logistics, personnel management, culinary arts, restaurant and menu planning, executive chef functions, event planning and management, health and safety, insurance, and applicable law and regulations.

### INTRODUCTORY LEVEL COURSES

- Business Essentials
- Introduction to Family & Consumer Sciences
- Career & Life Planning

### TECHNICAL LEVEL COURSES

- Culinary Essentials
- Nutrition & Wellness

#### *Event Planning & Management Strand*

- Foundations of Travel & Tourism
- Event Planning & Management

#### *Culinary Arts & Management Strand*

- Culinary Arts I
- Culinary Arts II
- Baking & Pastry I
- Baking & Pastry II
- Food Science
- Event Planning & Management

#### *Additional Courses*

- Entrepreneurship
- Principles of Marketing

### APPLICATION-LEVEL COURSES

#### *Event Planning & Management Strand*

- Community Connections
- Career Connections
- Applied Business Development

#### *Culinary Arts & Management Strand*

- Culinary Workplace Experience
- Community Connections
- Career Connections

### OCCUPATIONS

- Bakers
- Chefs & Head Cooks
- Cooks (Fast Food)
- Cooks (Institution and Cafeteria)
- Cooks (Private Household)
- Cooks (Restaurant)
- Dishwashers
- Fast Food & Counter Workers
- First-Line Supervisors of Food Preparation & Serving Workers
- Food Preparation Workers
- Food Servers (Non-restaurant)
- Food Service Managers
- Hosts & Hostesses (Restaurant, Lounge, & Coffee Shop)
- Waiters & Waitresses

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- AAFCS Pre-Pac: Broad Field Family & Consumer Sciences
- AAFCS Pre-Pac: Culinary Arts
- CareerSafe: OSHA Safety Certification (10 Hour)
- KS Restaurant & Hospitality: ServSafe (Food Handlers)
- NC3: Data Analytics/Harnessing the Power of Data

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- KS Restaurant & Hospitality Association: Pro-Start
- KS Restaurant & Hospitality: ServSafe (Manger)

Occupations & Degrees	Median Annual Wage
<b>Short-Term On-the-Job Training</b>	
Food Servers (Non-restaurant)	\$23,880
Hosts & Hostesses (Restaurant, Lounge, & Coffee Shop)	\$26,000
Fast Food & Counter Workers	\$26,580
Dishwashers	\$26,840
Food Preparation Workers	\$28,790
Cooks (Fast Food)	\$29,210
Cooks (Institution and Cafeteria)	\$29,630
Waiters and Waitresses	\$30,520
<b>Moderate-Term On-the-Job Training</b>	
Bakers	\$30,800
Cooks (Restaurant)	\$32,310
<b>H.S. Diploma &amp; Work Experience</b>	
First-Line Supervisors of Food Preparation & Serving Workers	\$37,230
*Chefs & Head Cooks	\$53,760
*Food Service Managers	\$63,030
* High Demand, High Wage	

### Sources:

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

### 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 \(ksde.gov\)](#)
- [Hospitality and Tourism Career Cluster \(onetoonline.org\)](#)
- [Careers in Hospitality & Tourism \(MyNextMove.org\)](#)
- [Hospitality and Tourism 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: Restaurant Manager \(HirePaths.com\)](#)

### STUDENT ORGANIZATION

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



- [Kansas DECA](#)





# Travel & Tourism

## Pathway

This pathway prepares individuals to serve as general managers and directors of hospitality operations on a system-wide basis, including both travel arrangements and promotion and the provision of traveler facilities. It includes instruction in principles of operations in the travel and tourism, hotel and lodging facilities, food services, and recreation facilities industries; hospitality marketing strategies; hospitality planning; management and coordination of franchise and unit operations; business management; accounting and financial management; hospitality transportation and logistics; and hospitality industry policies and regulations.

### INTRODUCTORY LEVEL COURSES

- Business Essentials
- Introduction to Family & Consumer Sciences
- Career & Life Planning

### TECHNICAL LEVEL COURSES

- Entrepreneurship
- Principles of Marketing
- Culinary Essentials
- Foundations of Hospitality & Lodging
- Foundations of Travel & Tourism
- Nutrition & Wellness
- Event Planning & Management

### APPLICATION-LEVEL COURSES

- Hospitality & Lodging Management
- Community Connections
- Career Connections

### OCCUPATIONS

- Adventure Travel Specialist
- Airline Customer Service Representative
- Convention Services Manager
- Cruise Ship Director
- Destination Marketing Manager
- Development Director of Tourism
- Development Director of Visitor Services
- Director of Communication
- Director of Convention & Visitors Bureau
- Director of Marketing & Advertising
- Director of Meetings
- Director of Membership
- Director of Volunteer Services
- Eco-System Tourism Coordinator
- Entertainment & Recreation Managers
- Events Manager/Planner
- First-Line Supervisors of Housekeeping & Janitorial Workers

### OCCUPATIONS *(continued)*

- Flight Attendant
- Food Service Managers
- Hotel, Motel, & Resort Desk Clerks
- Interpreter
- Janitors & Cleaners (except Maids & Housekeeping Cleaners)
- Lodging Managers
- Maids & Housekeeping Cleaners
- Meeting Planner/Director
- Motor Coach Operator
- Personal Service Managers, All Others
- Tour & Travel Consolidator
- Tour Guide
- Tourism Marketing Specialist
- Transportation Specialist
- Travel Agent/Consultant
- Travel Blogger/Content Creator

### SOURCES

- [Career Exploration through FCCLA](#)
- [Career Pathway Plan of Study \(CareerTech.org\)](#)

Occupations & Degrees	Median Annual Wage
<b>Short-Term On-the-Job Training</b>	
Maids & Housekeeping Cleaners	\$28,300
Janitors & Cleaners (except Maids & Housekeeping Cleaners)	\$30,380
<b>H.S. Diploma &amp; Work Experience</b>	
Hotel, Motel, & Resort Desk Clerks	\$27,850
* First-Line Supervisors of Housekeeping & Janitorial Workers	\$45,910
* High Demand, High Wage	
<b>Sources:</b>	
• <a href="#">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a>	
• <a href="#">Kansas Labor Information Center (KLIC) – High Demand Occupations (ks.gov)</a>	

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- CareerSafe: OSHA Safety Certification (10 Hour)
- NC3: Data Analytics/Harnessing the Power of Data

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- KS Restaurant & Hospitality: ServSafe (Manager)

### 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 \(ksde.gov\)](#)
- [Hospitality and Tourism Career Cluster \(onetoonline.org\)](#)
- [Careers in Hospitality & Tourism \(MyNextMove.org\)](#)
- [Hospitality and Tourism 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: Restaurant Manager \(HirePaths.com\)](#)

### STUDENT ORGANIZATION

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



- [Kansas DECA](#)





## FAMILY & CONSUMER SCIENCES INDUSTRY

# Human Services

Early Childhood Development & Services  
Family, Community & Consumer Services  
Fashion, Apparel, Interior Design (FAID)

## Occupation Overview

Occupations & Degrees	Median Annual Wage
H.S. Diploma & Short-Term On-the-Job Training	
Childcare Workers	\$27,200
Social & Human Service Assistants	\$37,220
H.S. Diploma & Work Experience or Bachelor's Degree	
First-Line Supervisors of Entertainment & Recreation Workers (except Gambling Services)	\$44,550
*Child, Family, & School Social Workers	\$48,950
*Substance Abuse, Behavioral Disorder, & Mental Health Counselors	\$50,990
Bachelor's Degree & Work Experience or Master's Degree & Internship/Residency	
*Healthcare Social Workers	\$61,810
*Social & Community Service Managers	\$74,400

\* High Demand, High Wage

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





# Early Childhood Development & Services Pathway

This pathway prepares individuals to be primary providers of home, family, residential, or institutional- based childcare services. It includes instruction in child growth and development, nutrition, recreation, planning and supervision of play and learning activities, child abuse and neglect prevention, parent-child relationships, and applicable legal and administrative requirements.

## INTRODUCTORY LEVEL COURSES

- Introduction to Education
- Introduction to Family & Consumer Sciences
- Career & Life Planning

## TECHNICAL LEVEL COURSES

- Leadership Service in Action
- Teaching Observation

### Early Childhood Education Strand

- Orientation to Early Childhood Development
- Foundations of Early Childhood Develop

### Early Childhood Related Services Strand

- Foundations of Early Childhood Development
- Family Studies
- Human Growth & Development (Early Years)

## APPLICATION-LEVEL COURSES

- Early Childhood Applications
- Community Connections
- Career Connections

## OCCUPATIONS

- Childcare Workers
- Child Welfare Specialist
- Community & Social Services Specialist (All Other)
- Early Childhood Educator (specializing in Family Support)
- Education & Childcare Administrators (Preschool & Daycare)
- Education Administrators (Kindergarten through Secondary)
- Family Life Educator
- Foster Care Coordinator
- Parent Educator
- Preschool Teachers (except Special Education)
- Social & Human Services Assistance

## SOURCES

[Human Services \(fcclainc.org\)](http://Human Services (fcclainc.org))

Occupations & Degrees	Median Annual Wage
H.S. Diploma & Short to Moderate-Term On-the-Job Training	
Childcare Workers	\$27,200

## Source:

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

## HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- AAFCS Pre-Pac: Broad Field Family & Consumer Sciences
- AAFCS Pre-Pac: Early Childhood Education
- American Red Cross/American Heart Association: Cardiopulmonary Resuscitation (CPR) (Infant/Toddler)
- CareerSafe: OSHA Safety Certification (10 Hour)
- Council for Professional Recognition: Child Development Associates (CDA)
- KCCTO: Foundation for Safe & Healthy Early Care Facilities: Module (18 clock hours: must complete all)
- 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 \(kansasregents.org\)](http://Excel in CTE Initiative (kansasregents.org))
- [Tiered Technical Courses \(ksde.org\)](http://Tiered Technical Courses (ksde.org))

## POSTSECONDARY PROGRAMS

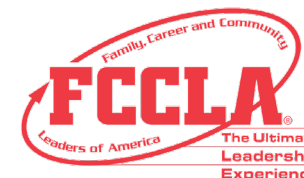
- [Kansas DegreeStats \(ksdegreestats.org\)](http://Kansas DegreeStats (ksdegreestats.org))
- [Degree Stats Lesson \(ksde.org\)](http://Degree Stats Lesson (ksde.org))
- [K-TIP Report \(kansasregents.org\)](http://K-TIP Report (kansasregents.org))
- [Program Alignment \(kansasregents.org\)](http://Program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

## RESOURCES

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

## STUDENT ORGANIZATION

- [Family, Community and Career Leaders of America \(FCCLA\)](http://Family, Community and Career Leaders of America (FCCLA))





# Family, Community & Consumer Services

## Pathway

This pathway prepares individuals for employment in careers that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.

### INTRODUCTORY LEVEL COURSES

- Introduction to Family & Consumer Sciences
- Career & Life Planning

### TECHNICAL LEVEL COURSES

- Culinary Essentials
- Nutrition & Wellness
- Family Studies
- Leadership Service in Action
- Relationships & Personal Development
- Human Growth & Development (Early Years)
- Lifespan Development

### APPLICATION-LEVEL COURSES

- Community Connections
- Career Connections

### OCCUPATIONS

- Adoption Specialist
- Case Manager
- Child, Family, & School Social Workers
- Childcare Workers
- Community & Social Services Specialist (All Other)
- Community Outreach Coordinator
- Consumer Advocate
- Counselors (All Other)
- Credit Counseling
- Customer Service Representative
- Debt Management Advisor
- Domestic Violence Advocate
- Family Support Specialist
- Financial Counselor (Personal Budgeting)
- Healthcare Social Workers
- Insurance Advisor (Personal & Family Needs)
- Mental Health & Substance Abuse Social Workers
- Nonprofit Program Manager
- Social & Community Service Managers
- Social & Human Service Assistants

### OCCUPATIONS *(continued)*

- Social Scientist & Related Workers (All Other)
- Social Workers (All Other)
- Substance Abuse, Behavioral Disorder, & Mental Health Counselors
- Youth Advocate

### SOURCES

[Human Services \(fcclaimc.org\)](http://HumanServices(fcclaimc.org))

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma &amp; Short to Moderate-Term On-the-Job Training</b>	
Social & Human Service Assistants	\$37,220
First-Line Supervisors of Entertainment & Recreation Workers (except Gambling Services)	\$44,550
<b>Bachelor's Degree</b>	
* Child, Family, & School Social Workers	\$48,950
* Substance Abuse, Behavioral Disorder, & Mental Health Counselors	\$50,990
* Social & Community Service Managers	\$74,400
<b>Master's Degree &amp; Internship/Residency</b>	
* Healthcare Social Workers	\$61,810
* High Demand, High Wage	
<b>Source:</b>	
• <a href="http://KansasLaborInformationCenter(KLIC)-CareerPosters(ks.gov)">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a>	

### 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 \(kansasregents.org\)](http://ExcelinCTEInitiative(kansasregents.org))
- [Tiered Technical Courses \(ksde.org\)](http://TieredTechnicalCourses(ksde.org))

### POSTSECONDARY PROGRAMS

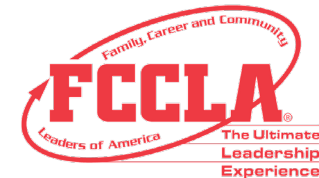
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- [Degree Stats Lesson \(ksde.org\)](http://DegreeStatsLesson(ksde.org))
- [K-TIP Report \(kansasregents.org\)](http://K-TIPReport(kansasregents.org))
- [Program Alignment \(kansasregents.org\)](http://ProgramAlignment(kansasregents.org))
- [Kansas Post-Secondary Exploration Guide \(ksde.org\)](http://KansasPost-SecondaryExplorationGuide(ksde.org))

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](http://CommonCareerTechnicalCore&CTECourseCompetencies(ksde.gov))
- [Human Services Career Cluster \(onetonline.org\)](http://HumanServicesCareerCluster(onetonline.org))
- [Careers in Human Services \(MyNextMove.org\)](http://CareersinHumanServices(MyNextMove.org))
- [Human Services Advance CTE \(careertech.org\)](http://HumanServicesAdvanceCTE(careertech.org))
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](http://KansasLaborInformationCenter(KLIC)-CareerPosters(ks.gov))
- [Kansas Labor Information Center \(KLIC\) – High Demand Occupations \(ks.gov\)](http://KansasLaborInformationCenter(KLIC)-HighDemandOccupations(ks.gov))
- [Today's Occupations \(ks.gov\)](http://Today'sOccupations(ks.gov))
- [Cool Careers: Early Childhood Teacher \(HirePaths.com\)](http://CoolCareers:EarlyChildhoodTeacher(HirePaths.com))

### STUDENT ORGANIZATION

- [Family, Community and Career Leaders of America \(FCCLA\)](http://Family,CommunityandCareerLeadersofAmerica(FCCLA))





# Fashion, Apparel, Interior Design (FAID)

## Pathway

This pathway prepares individuals in the areas of designing, producing and exhibiting apparel and textiles.

### INTRODUCTORY LEVEL COURSES

- Introduction to Family & Consumer Sciences
- Career & Life Planning
- Drafting/Print Reading
- Introduction to Drawing

### TECHNICAL LEVEL COURSES

- Essentials of FAID
- FAID Merchandising & Entrepreneurship  
*Fashion and Apparel Design (Strand A)*
- Apparel Production I
- Apparel Production II
- Fashion Trends  
*Interior Design (Strand B)*
- Interior Design I
- Drafting/Architecture I
- Interior Design II

### APPLICATION-LEVEL COURSES

- Career Connections
- FAID Studio

### OCCUPATIONS

- Accessory Designer
- Apparel Production Specialist
- Commercial Designer
- Costume Designer
- Fabric & Apparel Patternmakers
- Fashion Buyer
- Fashion Designer
- Fashion Merchandiser
- Furniture Designer
- Footwear Designer
- Interior Designer
- Kitchen & Bath Designer
- Lighting Designer
- Personal Stylist
- Residential Designer
- Set & Exhibit Designer
- Space Planner
- Sustainable Design Consultant
- Technical Designer (Pattern Maker)
- Textile Designer
- Universal Design Specialist (Age-in-Place Design)

### SOURCES

[Arts and Design \(fcllinc.org\)](http://fcllinc.org)

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- AAFCS (pre-PAC): Fashion, Textiles & Apparel
- AAFCS (pre-PAC): Interior Design Fundamentals
- 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 \(kansasregents.org\)](http://kansasregents.org)
- [Tiered Technical Courses \(ksde.org\)](http://ksde.org)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](http://ksde.org)
- [Arts, Entertainment, & Design Career Cluster \(onetoonline.org\)](http://onetoonline.org)
- [Careers in Arts, Entertainment, & Design \(MyNextMove.org\)](http://MyNextMove.org)
- [Arts, Entertainment, & Design Advance CTE \(careertech.org\)](http://careertech.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](http://ks.gov)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](http://ks.gov)
- [Today's Occupations \(ks.gov\)](http://ks.gov)



# Public Services

- | Education & Training
- | Government & Public Administration
- | Law, Public Safety, Corrections, & Security



PUBLIC SERVICES INDUSTRY

# Education & Training

Teaching / Training

## Occupation Overview

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma or Associate Degree</b>	
Teaching Assistants (except Postsecondary)	\$29,690
Tutors	\$31,200
Self-Enrichment Teachers	\$37,190
Preschool Teachers (except Special Education)	\$43,260
<b>Bachelor's Degree</b>	
*Elementary School Teachers (except Special Education)	\$50,910
*Kindergarten Teachers (except Special Education)	\$52,670
*Middle School Teachers (except Special & Career / Technical Education)	\$58,160
*Secondary School Teachers (except Special & Career / Technical Education)	\$59,380
<b>Master's Degree</b>	
*Educational, Guidance, & Career Counselors & Advisors	\$51,220
*Instructional Coordinators	\$63,450
*Education Administrators (Kindergarten through Secondary)	\$96,050
*Education Administrators (Postsecondary)	\$103,930

\* High Demand, High Wage

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



# Teaching / Training

## Pathway

This pathway focuses on the general theory and practice of learning and teaching, the basic principles of educational psychology, the art of teaching, the planning and administration of educational activities, school safety and health issues, and the social foundations of education.

### INTRODUCTORY LEVEL COURSES

- Introduction to Education
- Introduction to Family & Consumer Sciences
- Career & Life Planning

### TECHNICAL LEVEL COURSES

- Teaching as a Career
- Coaching and Leadership
- Technology for Teachers
- Family Studies
- Teaching Observation
- Human Growth & Development (Early Years)
- Lifespan Development

### APPLICATION-LEVEL COURSES

- Teaching Internship
- Educational Leadership

### OCCUPATIONS

- Coaches & Scouts
- Educational Administrators (Kindergarten through Secondary)
- Education Teachers (Postsecondary)
- Education Administrators (Postsecondary)
- Educational, Guidance, & Career Counselors & Advisors
- Elementary School Teachers (except Special Education)
- Instructional Coordinators
- Kindergarten Teachers (except Special Education)
- Middle School Teachers (except Special & Career/Technical Education)
- Preschool Teachers (except Special Education)
- Secondary School Teachers (except Special & Career/Technical Education)
- Self-Enrichment Teachers
- Special Education Teaching Assistants
- Substitute Teachers (Short-Term)
- Teaching Assistants (except Postsecondary)

### OCCUPATIONS (continued)

- Teachers & Instructors (All Other)
- Tutors

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma or Associate's Degree</b>	
Teaching Assistants (except Postsecondary)	\$29,690
Tutors	\$31,200
Self-Enrichment Teachers	\$37,190
Preschool Teachers (except Special Education)	\$43,260
<b>Bachelor's Degree</b>	
Substitute Teachers (Short-Term)	\$33,280
* Coaches & Scouts	\$47,070
*Elementary School Teachers (except Special Education)	\$50,910
*Kindergarten Teachers (except Special Education)	\$52,670
*Middle School Teachers (except Special & Career/Technical Education)	\$58,160
*Secondary School Teachers (except Special & Career/Technical Education)	\$59,380
* Teachers and Instructors (All Other)	\$91,100
<b>Master's Degree &amp; Internship/Residency</b>	
*Educational, Guidance, & Career Counselors & Advisors	\$51,220
*Instructional Coordinators	\$63,450
*Education Administrators (Kindergarten through Secondary)	\$96,050
*Education Administrators (Postsecondary)	\$103,930
* High Demand, High Wage	
<b>Sources:</b>	
• <a href="http://ks.gov">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a>	
• <a href="http://ks.gov">Kansas Labor Information Center (KLIC) - High Demand Occupations (ks.gov)</a>	

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- AAFCS (pre-PAC): Education Fundamentals
- CareerSafe: OSHA Safety Certification (10 Hour)
- Master Teacher, Inc: Paraeducator assessment (Parts 1 & 2 - must take both)
- 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 \(kansasregents.org\)](http://kansasregents.org)
- [Tiered Technical Courses \(ksde.org\)](http://ksde.org)

### POSTSECONDARY PROGRAMS

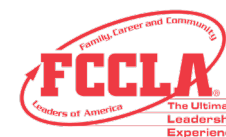
- [Kansas DegreeStats \(ksdegreestats.org\)](http://ksdegreestats.org)
- [Degree Stats Lesson \(ksde.org\)](http://ksde.org)
- [K-TIP Report \(kansasregents.org\)](http://kansasregents.org)
- [Program Alignment \(kansasregents.org\)](http://kansasregents.org)
- [Kansas Post-Secondary Exploration Guide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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](http://ksde.gov)
- [Education & Training Career Cluster \(onetonline.org\)](http://onetonline.org)
- [Education & Training Advance CTE \(careertech.org\)](http://careertech.org)
- [Careers in Education & Training \(MyNextMove.org\)](http://MyNextMove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](http://ks.gov)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](http://ks.gov)
- [Today's Occupations \(ks.gov\)](http://ks.gov)
- [Cool Careers: Elementary Teacher \(HirePaths.com\)](http://hirepaths.com)

### STUDENT ORGANIZATION

- [Family, Community and Career Leaders of America \(FCCLA\)](http://fccla.org)





PUBLIC SERVICES INDUSTRY

# Government & Public Administration

Government & Public Administration

## Occupation Overview

Occupations & Degrees	Median Annual Wage
H.S. Diploma & Short to Long-Term On-the-Job Training	
Court, Municipal, and License Clerks	\$40,580
*Construction and Building Inspectors	\$61,550
Bachelor's Degree	
*Occupational Health and Safety Specialists	\$69,540

\* High Demand, High Wage

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



# Government & Public Administration

## Pathway

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
- Introduction to Government & Public Administration

### TECHNICAL LEVEL COURSES

- Government & Public Administration Fundamentals
- IT for Service Professions
- Lifespan Development

#### *Public Administration Strand*

- Business Management
- Business Law
- Accounting
- Business Economics

#### *Pre-Law Legal Assistance Strand*

- Government & Public Media Relations
- Business Law
- Business Economics
- Practical Law

### APPLICATION-LEVEL COURSES

- Career Connections
- Governance Applications
- Foundations in Law
- Legal Proceedings

### OCCUPATIONS

- Construction & Building Inspectors
- Court, Municipal, & License Clerks
- General & Operations Managers
- Legislators
- Managers (All Other)
- Occupational Health & Safety Specialists
- Postmasters & Mail Superintendents
- Social & Community Service Managers
- Transportation, Storage, & Distribution Managers

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma &amp; Short to Long-Term On-the-Job Training</b>	
Court, Municipal, & License Clerks	\$40,580
* Construction & Building Inspectors	\$61,550
<b>Bachelor's Degree</b>	
* Occupational Health & Safety Specialists	\$69,540
* High Demand, High Wage	
<b>Sources:</b>	
• <a href="#">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a>	

### 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 \(onetonline.org\)](#)
- [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 \(ksbar.org\)](#)





## PUBLIC SERVICES INDUSTRY

# Law, Public Safety, Corrections, & Security

Corrections, Security, Law, & Law Enforcement Services  
Emergency & Fire Management Services

## Occupation Overview

Occupations & Degrees	Median Annual Wage
H.S. Diploma or Short-Term On-the-Job Training	
Lifeguards, Ski Patrol, & Other Recreational Protective Service Workers	\$22,210
Security Guards	\$33,470
Protective Service Workers, All Other	\$42,640
H.S. Diploma & Moderate-Term On-the-Job Training or Nondegree Award	
Emergency Medical Technicians	\$30,890
Correctional Officers & Jailers	\$42,020
*Police & Sheriff's Patrol Officers	\$53,170
*Detectives & Criminal Investigators	\$63,590
Postsecondary Degree or Long-Term On-the-Job Training	
Firefighters	\$42,370
*Paralegals & Legal Assistants	\$47,320
*Lawyers	\$110,410

\* High Demand, High Wage

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



# Corrections, Security, Law & Law Enforcement Services

## Pathway

This pathway prepares individuals to apply theories and practices of organization management and criminal justice to the administration of public law enforcement agencies and operations. It includes instruction in law enforcement history and theory, operational command leadership, administration of public police organizations, labor relations, incident response strategies, legal and regulatory responsibilities, budgeting, public relations, and organizational leadership.

### INTRODUCTORY LEVEL COURSES

- Introduction to Law, Public Safety, Corrections & Security (LPSCS)

### TECHNICAL LEVEL COURSES

#### Pre-Law Strand

- Business Communications
- Business Management
- Business Law
- Accounting
- Business Economics
- Practical Law

#### Law Enforcement Strand

- EMS First Responder
- Hazardous Materials for the First Responder
- Law Enforcement I
- Forensic Science I

### APPLICATION-LEVEL COURSES

#### Pre-Law Strand

- Foundations in Law
- Legal Proceedings
- Work Experience in LPSCS

#### Law Enforcement Strand

- Law Enforcement II
- Certified Protection Officer
- Corrections Officer
- Forensic Science II
- Work Experience in LPSCS

### OCCUPATIONS

- Correctional Officers & Jailers
- Criminal Justice & Law Enforcement Teachers (Postsecondary)
- Detectives & Criminal Investigators
- Lawyers
- Lifeguards, Ski Patrol, & Other Recreational Protective Service Workers
- Paralegals & Legal Assistants
- Police & Sheriff's Patrol Officers
- Protective Service Workers (All Other)
- Security Guards

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma or Short-Term On-the-Job Training</b>	
Lifeguards, Ski Patrol, & Other Recreational Protective Service Workers	\$22,210
Security Guards	\$33,470
Protective Service Workers (All Other)	\$42,640
<b>H.S. Diploma &amp; Moderate-Term On-the-Job Training or Nondegree Award</b>	
Correctional Officers & Jailers	\$42,020
*Police & Sheriff's Patrol Officers	\$53,170
*Detectives & Criminal Investigators	\$63,590
<b>Postsecondary Degree or Long-Term On-the-Job Training</b>	
*Paralegals & Legal Assistants	\$47,320
*Lawyers	\$110,410

\* High Demand, High Wage

Sources:

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

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- American Red Cross/American Heart Association: Basic Life Support (BSL)
- American Red Cross/American Heart Association: Cardiopulmonary Resuscitation (CPR) (Infant/Child)
- American Red Cross/ American Heart Association: First Aid
- International Federation of Protection Officers: Certified Protection Officer
- KS Emergency Medical Services Association: Emergency Medical Responder (EMR) (First Responder)
- 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 \(ksde.gov\)](#)
- [Law, Public Safety, Corrections, and Security Career Cluster \(onetonline.org\)](#)
- [Law, Public Safety, Corrections, and Security Advance CTE \(careertech.org\)](#)
- [Careers in Law, Public Safety, Corrections, and Security \(MyNextMove.org\)](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)
- [Today's Occupations \(ks.gov\)](#)
- [LAPSEN | Home](#)
- [Kansas Mock Trial \(ksbar.org\)](#)

### STUDENT ORGANIZATION

- [Skills USA Kansas](#)





# Emergency & Fire Management Services

## Pathway

This pathway prepares students for careers in emergency services and fire science occupations.

### INTRODUCTORY LEVEL COURSES

- Introduction to Law, Public Safety, Corrections & Security (LPSCS)
- Introduction to Emergency Medical Services (EMS)

### TECHNICAL LEVEL COURSES

- Medical Terminology
- EMS First Responder
- Hazardous Materials for the First Responder
- Fire Service Special Operations

### APPLICATION-LEVEL COURSES

- EMT I
- EMT II
- Fire Science I
- Fire Science II
- Work Experience in LPSCS

### OCCUPATIONS

- Emergency Medical Technicians & Paramedics
- Firefighters
- First Line Supervisors of Firefighting & Prevention Workers

Occupations & Degrees	Median Annual Wage
H.S. Diploma & Moderate-Term On-the-Job Training or Nondegree Award	
Emergency Medical Technicians	\$30,890
Postsecondary Degree or Long-Term On-the-Job Training	
Firefighters	\$42,370
First Line Supervisors of Firefighting & Prevention Workers	\$69,580

### 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

- American Red Cross/American Heart Association: Basic Life Support (BLS)
- American Red Cross/American Heart Association: Cardiopulmonary Resuscitation (CPR) (Infant/Child)
- American Red Cross/ American Heart Association: First Aid
- DOT: Hazardous Materials Transportation
- KS Emergency Medical Services Association: Emergency Medical Responder (EMR) (First Responder)
- Local Fire Departments: Fire Fighter (Level 2)
- NC3: Data Analytics/Harnessing the Power of Data

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATION

- KS Emergency Medical Services Association: Emergency Medical Technician (EMT)
- Local Fire Departments: Fire Fighter (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 \(kansasregents.org\)](#)
- [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 \(ksde.org\)](#)

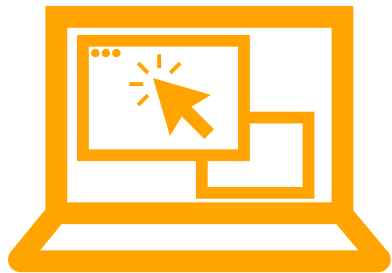
### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](#)
- [Law, Public Safety, Corrections, and Security Career Cluster \(onetonline.org\)](#)
- [Law, Public Safety, Corrections, and Security Advance CTE \(careertech.org\)](#)
- [Careers in Law, Public Safety, Corrections, and Security \(MyNextMove.org\)](#)
- [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 State Firefighters Association](#)
- [The Kansas Board of Emergency Medical Services \(ksbems.org\)](#)

### STUDENT ORGANIZATION

- [Skills USA Kansas](#)





# Media & Technology

| Information Technology



## MEDIA & TECHNOLOGY INDUSTRY

# Information Technology

Information Support & Services  
Media Design & Communications  
Networking & Telecommunications  
Programming & Software Development

## 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	\$32,570
*Computer User Support Specialist	\$49,960
Bachelor's Degree	
*Network & Computer Systems Administrators	\$81,390
*Software Quality Assurance Analysts & Testers	\$83,970
*Computer Programmers	\$88,030
*Computer Systems Analysts	\$102,180
*Software Developers	\$104,250
Bachelor's Degree & 5 Years or More Work Experience	
*Computer Network Architects	\$99,230
*Computer & Information Systems Managers	\$162,660

\* High Demand, High Wage

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



# Information Support & Services

## Pathway

This pathway prepares individuals to master and use computer software programs and applications for inputting, verifying, organizing, storing, retrieving, transforming (changing, updating, and deleting), and extracting information. It includes instruction in using various operating system configurations and in types of data entry such as word processing, spreadsheets, calculators, management programs, design programs, database programs, and research programs.

### INTRODUCTORY LEVEL COURSES

- Computing Systems
- Computer Applications

### TECHNICAL LEVEL COURSES

- Foundations of Information Technology

### APPLICATION-LEVEL COURSES

- CyberSecurity I
- CyberSecurity II
- Information Support & Services I
- Information Support & Services II
- Work-based Learning in Information Support & Services

### OCCUPATIONS

- Computer Occupations (All Other)
- Computer User Support Specialists
- Receptionists & Information Clerks

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	\$32,570
* Computer User Support Specialists	\$49,960

\* High Demand, High Wage

Sources:

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

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- Adobe: Digital Publishing Suite
- CISCO: CCNA
- CISCO: CCNP
- CISCO: CCIE
- CISCO: CCDE
- Microsoft (MOS): Microsoft Office Specialist - Associate A
- Microsoft (MOS): Microsoft Office Specialist – Expert A
- NC3: Data Analytics/Harnessing the Power of Data

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

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

### 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 \(kansasregents.org\)](http://kansasregents.org)
- [Tiered Technical Courses \(ksde.org\)](http://ksde.org)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](http://ksde.org)
- [Digital Technology Career Cluster \(onetonline.org\)](http://onetonline.org)
- [Digital Technology Advance CTE \(careertech.org\)](http://careertech.org)
- [Careers in Digital Technology \(MyNextMove.org\)](http://MyNextMove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](http://ks.gov)
- [Kansas Labor Information Center \(KLIC\) – High Demand Occupations \(ks.gov\)](http://ks.gov)
- [Today's Occupations \(ks.gov\)](http://ks.gov)
- [Cool Careers: Cybersecurity Analyst \(HirePaths.com\)](http://HirePaths.com)

### STUDENT ORGANIZATION

- [Business Professionals of America](http://bpa.org)



- [Future Business Leaders of America](http://fbla.org)



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



- [Technology Student Association](http://tsa.org)





# Media Design & Communications

## Pathway

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

- Introduction to Web & Digital Media
- Computer Applications
- Drawing for Designers

### TECHNICAL LEVEL COURSES

- Graphic Design II
- Computer Programming
- Web Design
- Interactive Media
- Principles of Illustration
- Graphic Design I

*Optional Support Courses:  
Content Creation*

- 2D Animation
- 3D Animation
- Journalism & Media Communications
- Audio/Video Production I
- Digital Media Technology
- Photo Imaging
- Media & Public Relations

### APPLICATION-LEVEL COURSES

*Graphic Design Strand*

- Graphic Design Workplace Experience
- Applied Graphic Design

*Web & Digital Design Strand*

- Applied Game Design
- Web & Design Workplace Experience

*Optional Support Courses:  
Content Creation*

- Audio/Video Production II
- Media Design & Production
- Advanced Media Design & Production

### OCCUPATIONS

- Career/Technical Education Teaches (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	\$49,180
<b>Master's Degree</b>	
*Librarians & Media Collections Specialists	\$60,400

\* High Demand, High Wage

#### Sources:

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

### 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 \(kansasregents.org\)](http://ksde.org)
- [Tiered Technical Courses \(ksde.org\)](http://ksde.org)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](http://ksde.org)
- [Digital Technology Career Cluster \(onetonline.org\)](http://onetonline.org)
- [Digital Technology Advance CTE \(careertech.org\)](http://careertech.org)
- [Careers in Digital Technology \(MyNextMove.org\)](http://MyNextMove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](http://ks.gov)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](http://ks.gov)
- [Today's Occupations \(ks.gov\)](http://ks.gov)
- [Cool Careers: Cybersecurity Analyst \(HirePaths.com\)](http://HirePaths.com)

### STUDENT ORGANIZATION

- [Business Professionals of America](http://bpa.org)



- [Future Business Leaders of America](http://fbla.org)



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



- [Technology Student Association](http://tsa.org)





# Networking & Telecommunications

## Pathway

This pathway focuses on the design, implementation, and management of linked systems of computers, peripherals, and associated software to maximize efficiency and productivity, and that prepares individuals to function as network specialists and managers at various levels. It includes instruction in operating systems and applications; systems design and analysis; networking theory and solutions; types of networks; network management and control; network and flow optimization; security; configuring; and troubleshooting.

### INTRODUCTORY LEVEL COURSES

- Computing Systems
- Computer Applications
- IoT Internet of Things

### TECHNICAL LEVEL COURSES

- Foundations of Information Technology
- Telecommunications
- Digital Electronics
- GIS Technology
- Fundamentals of Electricity & Electronics

### APPLICATION-LEVEL COURSES

- Network Systems I
- Network Systems II
- Telecom Workplace Experience
- Applied Telecommunications
- GIS Spatial Applications

### OCCUPATIONS

- Computer & Information Systems Managers
- Computer Network Architects
- Computer Network Support Specialists
- Computer Occupations (All Other)
- Computer Science Teachers (Postsecondary)
- Computer Systems Analysts
- Information Security Analysts
- Network & Computer Systems Administrators

Occupations & Degrees	Median Annual Wage
<b>Bachelor's Degree</b>	
*Network & Computer Systems Administrators	\$81,390
*Computer Occupations (All Other)	\$91,100
<b>Bachelor's Degree &amp; 5 Years or More Work Experience</b>	
*Computer Network Architects	\$99,230
*Computer & Information Systems Managers	\$162,660

\* 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

- CISCO: Certified Entry Networking Technician CCENT
- CISCO: CCDE
- CISCO: CCIE
- CISCO: CCNA
- CISCO: CCNP
- Citrix: Certified Associate (Networking)
- Microsoft (MOS): Microsoft Office Specialist (Associate A)
- Microsoft (MOS): Microsoft Office Specialist (Expert A)
- 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 \(kansasregents.org\)](#)
- [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 \(ksde.gov\)](#)
- [Digital Technology Career Cluster \(onetonline.org\)](#)
- [Digital Technology Advance CTE \(careertech.org\)](#)
- [Careers in Digital Technology \(MyNextMove.org\)](#)
- [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: Cybersecurity Analyst \(HirePaths.com\)](#)

### STUDENT ORGANIZATION

- [Business Professionals of America](#)



- [Future Business Leaders of America](#)



- [Skills USA Kansas](#)



- [Technology Student Association](#)







# Programming & Software Development

## Pathway

This pathway focuses on the general writing and implementation of generic and customized programs to drive operating systems and that generally prepares individuals to apply the methods and procedures of software design and programming to software installation and maintenance. It includes instruction in software design, low- and high-level languages and program writing; program customization and linking; prototype testing; troubleshooting; and related aspects of operating systems and networks.

### INTRODUCTORY LEVEL COURSES

- Computing Systems
- Computer Applications
- Introduction to Computer Coding
- Introduction to Physical Computing

### TECHNICAL LEVEL COURSES

- Database Applications
- Data Systems/Processing
- Computer Programming
- Computer Programming (Other Languages)
- Web Design
- AP Computer Science Principles
- Technical Introduction to Computer Science

### APPLICATION-LEVEL COURSES

- CyberSecurity I
- Cybersecurity II
- AP Computer Science A
- IB Computing
- Particular Topics in Computer Programming
- Work-based Learning in Programming & Software Development

### OCCUPATIONS

- Computer Network Support Specialists
- Computer Programmers
- Computer Science Teachers (Postsecondary)
- Computer Systems Analysts
- Software Developers
- Software Quality Assurance Analysts & Testers
- Web & Digital Interface Designers
- Web Developers

Occupations & Degrees	Median Annual Wage
<b>Bachelor's Degree</b>	
*Software Quality Assurance Analysts & Testers	\$83,970
*Computer Programmers	\$88,030
Computer Systems Analysts	\$102,180
*Software Developers	\$104,250

\* High Demand, High Wage

Sources:

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

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- Adobe: Dreamweaver
- Adobe: Illustrator
- Apple: App Development with Swift (Level 1)
- CISCO: CCDE
- CISCO: CCIE
- CISCO: CCNA
- CISCO: CCNP
- Microsoft (MOS): Microsoft Office Specialist (Associate A)
- Microsoft (MOS): Microsoft Office Specialist (Expert A)
- NC3: Data Analytics/Harnessing the Power of Data

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- 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 \(kansasregents.org\)](#)
- [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 \(ksde.gov\)](#)
- [Digital Technology Career Cluster \(onetonline.org\)](#)
- [Digital Technology Advance CTE \(careertech.org\)](#)
- [Careers in Digital Technology \(MyNextMove.org\)](#)
- [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: Cybersecurity Analyst \(HirePaths.com\)](#)

### STUDENT ORGANIZATION

- [Business Professionals of America](#)



- [Future Business Leaders of America](#)



- [Skills USA Kansas](#)



- [Technology Student Association](#)





# Health

| Health & Biosciences



## HEALTH INDUSTRY

# Health & Biosciences

Biotechnology  
Health Science

## Occupation Overview

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma or Non-Degree Award</b>	
Home Health & Personal Care Aides	\$27,920
Nursing Assistants	\$35,450
Medical Secretaries & Administrative Assistants	\$37,340
Medical Assistants	\$37,670
Pharmacy Technicians	\$37,960
<b>Associate's Degree</b>	
Veterinary Technologists & Technicians	\$37,350
*Physical Therapist Assistant	\$61,160
*Radiologic Technologies & Technicians	\$64,210
*Occupational Therapy Assistants	\$65,450
*Dental Hygienists	\$78,670
<b>Bachelor's, Master's, or Doctoral/Professional Degree</b>	
*Registered Nurses	\$75,780
*Medical & Health Services Managers	\$101,450
*Nurse Practitioners	\$119,930
*Pharmacists	\$132,920

\* High Demand, High Wage

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



# Biotechnology

## Pathway

This pathway focuses on using biology, biochemistry, and genetics to improve agriculture, healthcare, industry, and the environment. It includes topics like gene research, biotechnology, microbiology, drug development, DNA sequencing, and ethical and legal aspects of the field.

### INTRODUCTORY LEVEL COURSES

- Chemistry
- Computing Systems
- Computer Applications

### TECHNICAL LEVEL COURSES

- Anatomy & Physiology
- Human Body Systems
- Pharmacology
- Biotechnology Essentials

#### *Biomedical Strand*

- Medical Interventions
- Principles of Biomedical Science
- Robotics I

#### *Biochemistry Strand*

- Applied Biochemistry
- Plant & Soil Science
- Food Science

### APPLICATION-LEVEL COURSES

- Bioscience Workplace Experience
- Applied Biotechnology

#### *Biomedical Strand*

- Biomedical Innovation
- Emerging Technologies

#### *Biochemistry Strand*

- Particular Topics in Engineering

### OCCUPATIONS

- Biological Science Teachers (Postsecondary)
- Biological Scientists (All Other)
- Biological Technicians
- Clinical Laboratory Technologists & Technicians
- Natural Science Managers

Occupations & Degrees	Median Annual Wage
<b>Bachelor's Degree</b>	
* Biological Technicians	\$47,140
* Clinical Laboratory Technologists & Technicians	\$57,670

\* High Demand, High Wage

#### Sources:

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

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- American Red Cross/American Heart Association: Basic Life Support (BLS)
- American Red Cross/American Heart Association: Cardiopulmonary Resuscitation (CPR) (Infant/Child)
- American Red Cross/ American Heart Association: First Aid
- Bioscience Core Skill Institute (BCSI): Aseptic Technique (Lab Bench Level)
- Biotility-Applied Biotech Training: Biotechnician Assistant Credential (BACE)
- Bioscience Core Skill Institute (BCSI): Essential 5
- Bioscience Core Skill Institute (BCSI): Numeracy
- Bioscience Core Skill Institute (BCSI): Safety - Hazard Assessment
- Bioscience Core Skill Institute (BCSI): Small Volume Metrology
- NC3: Data Analytics/Harnessing the Power of Data

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- KS Dept. for Aging & Disability Services: Certified Nurse Aide (CNA)
- KS Dept. of Agriculture: Pesticide Applicator (Personal or Commercial)

### 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://www.kansasregents.org/excel-in-cte)
- [Tiered Technical Courses \(ksde.org\)](https://www.ksde.org/tiered-technical-courses)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://www.ksde.org/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://www.careertech.org/health-science-advance-cte)
- [Careers in Health Science \(MyNextMove.org\)](https://www.mynextmove.org/careers-in-health-science)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://www.klic.org/kansas-labor-information-center-kllic-career-posters)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://www.klic.org/kansas-labor-information-center-kllic-high-demand-occupations)
- [Today's Occupations \(ks.gov\)](https://www.ks.gov/todays-occupations)

### STUDENT ORGANIZATION

- [Kansas Health Occupations Students of America \(HOSA\)](https://www.hosa.org)





# Health Science

## Pathway

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.

### INTRODUCTORY LEVEL COURSES

- Chemistry
- Introduction to Health Care

### TECHNICAL LEVEL COURSES

- Anatomy & Physiology
- Fundamentals of Emergency Services
- Human Body Systems
- Medical Interventions
- Medical Terminology
- Health Care Essentials I
- Nutrition & Wellness
- Health Care Essentials II
- EMS First Responder

#### *Sports Med/Rehabilitation Strand*

- Fundamentals of Rehab
- Care of Athletes
- Sports Medicine I

#### *Allied Health Strand*

- Medical Imaging
- Principles of Phlebotomy
- Pharmacology

### APPLICATION-LEVEL COURSES

- Certified Patient Care Technician
- Certified Nursing Assistant
- Certified Medication Aide
- Health Care Work Experience I
- Health Care Work Experience II

#### *Sports Med/Rehabilitation Strand*

- Sports Medicine II

#### *Allied Health Strand*

- Home Health Aide
- Principles of Pharmacy
- EKG Technician
- EMT I
- EMT 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)
- Psychiatric Technicians
- Radiologic Technologists & Technicians
- Respiratory Therapists
- Registered Nurses
- Speech-Language Pathologists
- Surgical Technologists
- Veterinary Technologists & Technicians

Occupations & Degrees	Median Annual Wage
<b>Postsecondary Nondegree Award</b>	
Pharmacy Aides	\$27,390
Home Health & Personal Care Aides	\$27,920
Nursing Assistants	\$35,450
Psychiatric Technicians	\$37,230
Medical Secretaries & Administrative Assistants	\$37,340
Medical Assistants	\$37,670
Phlebotomists	\$37,870
Pharmacy Technicians	\$37,960
Dental Assistants	\$39,290
* Medical Records Specialists	\$46,750
* Health Technologists & Technicians (All Other)	\$47,150
* Surgical Technologists	\$51,020
* Licensed Practical & Licensed Vocational Nurses	\$55,540
<b>Associate's Degree</b>	
Veterinary Technologists & Technicians	\$37,350
* Physical Therapist Assistants	\$61,160
* Radiologic Technologists & Technicians	\$64,210
* Occupational Therapy Assistants	\$65,450
* Respiratory Therapists	\$69,420
* Dental Hygienists	\$78,670
* Diagnostic Medical Sonographers	\$85,700
<b>Bachelor's Degree</b>	
* Clinical Laboratory Technologists & Technicians	\$57,670
* Registered Nurses	\$75,780
* Medical & Health Services Managers	\$101,450
<b>Master's Degree</b>	
* Speech-Language Pathologists	\$77,510
* Occupational Therapists	\$94,340
* Physician Assistants	\$116,970
* Nurse Practitioners	\$119,930
<b>Doctoral or Professional Degree</b>	
* Physical Therapists	\$95,790
* Pharmacists	\$132,920
* Physicians (All Other)	\$180,970
* High Demand, High Wage	
<b>Sources:</b>	
• <a href="#">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a>	
• <a href="#">Kansas Labor Information Center (KLIC) - High Demand Occupations (ks.gov)</a>	

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# 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://www.kansasregents.org/)
- [Tiered Technical Courses \(ksde.org\)](https://www.ksde.org/)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://www.ksde.gov/)
- [Health Science Career Cluster \(onetoonline.org\)](https://onetoonline.org/)
- [Health Science Advance CTE \(careertech.org\)](https://careertech.org/)
- [Careers in Health Science \(MyNextMove.org\)](https://mynextmove.org/)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://www.ks.gov/)
- [Kansas Labor Information Center \(KLIC\) – High Demand Occupations \(ks.gov\)](https://www.ks.gov/)
- [Today's Occupations \(ks.gov\)](https://www.ks.gov/)
- [Cool Careers: Registered Nurse \(HirePaths.com\)](https://hirepaths.com/)
- [Cool Careers: Medical Imaging Technician \(HirePaths.com\)](https://hirepaths.com/)

### STUDENT ORGANIZATION

- [Kansas Health Occupations Students of America \(HOSA\)](https://www.hosa.org/)





# Design, Production & Repair

- | Architecture & Construction
- | Engineering
- | Manufacturing
- | Transportation



DESIGN, PRODUCTION & REPAIR INDUSTRY

# Architecture & Construction

Construction & Design

## Occupation Overview

Occupations & Degrees	Median Annual Wage
Short to Moderate-Term On-the-Job Training	
Construction Laborers	\$39,190
Painters, Construction & Maintenance	\$45,100
*Operating Engineers & Other Construction Equipment Operators	\$47,760
*Cement Mason & Concrete Finishers	\$48,390
H.S. Diploma & Apprenticeship	
*Carpenters	\$48,520
*Sheet Metal Workers	\$48,660
*Plumbers, Pipefitters, & Steamfitters	\$59,470
*Electricians	\$59,880
Bachelor's Degree	
*Cost Estimators	\$72,700
*Civil Engineers	\$81,910
*Construction Managers	\$102,980

\* High Demand, High Wage

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





# Construction & Design

## Pathway

This pathway generally prepares individuals to apply technical knowledge and skills in the building, inspecting, and maintaining of structures and related properties. It may include instruction in masonry, carpentry, electrical and power transmission installation, building/construction finishing, management, inspection and other construction-related applications.

### INTRODUCTORY LEVEL COURSES

- Drafting/Print Reading
- Production Print Reading I
- Introduction to Skilled Trades

### TECHNICAL LEVEL COURSES

#### Design Strand

- Interior Design I
- Interior Design II
- Architectural Design I
- Drafting/Architecture I
- Drafting/CAD

#### Construction Strand

- General Carpentry I
- Woodworking Principles
- Mechanical/Electrical/Plumbing (MEP) I

### APPLICATION-LEVEL COURSES

- Workplace Experience in Architecture & Construction
- Comprehensive Workplace Experience in Architecture & Construction

#### Design Strand

- Research & Design for Preconstruction
- Drafting/Architecture II
- Interior Architectural Design
- Architectural Design II

#### Construction Strand

- Sheet Metal Technology
- Research & Design in Building Trades
- Remodel & Building Maintenance
- HVAC Technology
- Plumbing Technology
- Electrical Technology
- General Carpentry II
- Advanced Materials & Fabrications

### OCCUPATIONS

- Architectural & Engineering Managers
- Carpenters
- Cement Masons & Concrete Finishers
- Civil Engineers
- Construction & Building Inspectors
- Construction Laborers
- 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
- Painters, Construction and Maintenance
- Plumbers, Pipefitters, & Steamfitters
- Sheet Metal Workers

Occupations & Degrees	Median Annual Wage
<b>Short to Moderate-Term On-the-Job Training</b>	
Construction Laborers	\$39,190
Painters, Construction & Maintenance	\$45,100
* Operating Engineers & Other Construction Equipment Operators	\$47,760
* Cement Mason & Concrete Finishers	\$48,390
<b>H.S. Diploma &amp; Apprenticeship</b>	
* Carpenters	\$48,520
* Sheet Metal Workers	\$48,660
Plumbers, Pipefitters, & Steamfitters	\$59,470
* Electricians	\$59,880
* First-Line Supervisors of Construction Trades & Extraction Workers	\$74,730
<b>Bachelor's Degree</b>	
* Cost Estimators	\$72,700
* Civil Engineers	\$81,910
* Construction Managers	\$102,980

\* High Demand, High Wage

**Sources:**

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

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# Construction & Design

## Pathway (continued)

### 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 \(kansasregents.org\)](http://kansasregents.org)
- [Tiered Technical Courses \(ksde.org\)](http://ksde.org)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

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

### STUDENT ORGANIZATION

- [Skills USA Kansas](http://SkillsUSA.org)



- [Technology Student Association](http://TSA.org)



◀ Continued from previous page



## DESIGN, PRODUCTION & REPAIR INDUSTRY

# Engineering

Automation Engineering

Aviation Production

Energy

Engineering & Applied Mathematics

## Occupation Overview

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma &amp; Moderate-Term On-the-Job Training</b>	
*Welders, Cutters, Solderers, & Brazers	\$48,150
*Inspectors, Testers, Sorters, Samplers, & Weighers	\$50,200
*Production, Planning, & Expediting Clerks	\$52,180
*Aircraft Structure, Surfaces, Rigging, & Systems Assemblers	\$61,500
<b>H.S. Diploma &amp; Less Than 5 Years Work Experience or Long-Term On-the-Job Training</b>	
*Machinists	\$47,250
*Industrial Machinery Mechanics	\$61,800
*First-Line Supervisors of Production & Operating Workers	\$68,810
<b>Bachelor's Degree</b>	
*Mechanical Engineers	\$83,260
*Industrial Engineers	\$93,560
*Electrical Engineers	\$93,700
*Industrial Production Managers	\$114,810

\* High Demand, High Wage

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



# Automation Engineering

## Pathway

This pathway prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, installing, calibrating, modifying and maintaining automated systems. It includes instruction in computer systems; electronics and instrumentation; programmable logic controllers (PLCs); electric, hydraulic and pneumatic control systems; actuator and sensor systems; process control; robotics; applications to specific industrial tasks; and report preparation.

### INTRODUCTORY LEVEL COURSES

- Introduction to Manufacturing
- Production Print Reading I
- Introduction to Computer Coding
- Introduction to Physical Computing
- Introduction to Skilled Trades
- Introduction to Engineering

### TECHNICAL LEVEL COURSES

- Computer Programming
- Mechanical Power Transmission Systems
- Fundamentals of Electrical Theory
- Engineering Design
- Robotics I
- Foundations of Electronics
- Welding Processes I
- Hand & Power Tools

### APPLICATION-LEVEL COURSES

- Cybersecurity I
- Industrial Maintenance Systems
- Digital Electronics
- Computer Integrated Manufacturing
- Comprehensive Workplace Experience in Engineering
- Robotics II
- Automated Integrated Systems I
- Automated Integrated Systems II
- Hydraulics and Pneumatics
- Workplace Experience in Engineering
- Materials Science in Engineering

### OCCUPATIONS

- Electrical & Electronic Engineering Technologists & Technicians
- Electro-Mechanical & Mechatronics Technologies & Technicians
- Mechanical Engineering Technologists & Technicians

Occupations & Degrees	Median Annual Wage
Associate Degree	
*Electrical & Electronic Engineering Technologists & Technicians	\$66,370
Bachelor's Degree	
Mechanical Engineering Technologists & Technicians	\$53,800

\* 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)
- IS CET: Associate Level CET Exam
- IS CET: 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: Robotics and Automation Engineer \(HirePaths.com\)](#)
- [Cool Careers: Drone Pilot \(HirePaths.com\)](#)

### STUDENT ORGANIZATION

- [Skills USA Kansas](#)



- [Technology Student Association](#)





# Aviation Production

## Pathway

This pathway generally prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in a wide variety of projects. It includes instruction in various engineering support functions for research, production, and operations, and applications to specific engineering specialties.

### INTRODUCTORY LEVEL COURSES

- Production Print Reading I
- Introduction to Skilled Trades

### TECHNICAL LEVEL COURSES

- Hand & Power Tools
- Aviation Fundamentals
- Aviation Systems

#### Design Strand

- Drafting/CAD

#### Production Strand

- Production Methods I

### APPLICATION-LEVEL COURSES

- Comprehensive Workplace Experience in Engineering
- Workplace Experience in Engineering

#### Design Strand

- Aerospace Drawings I
- Aerospace Drawings II
- Special Projects & Research in Aviation

#### Production Strand

- Aviation Tooling
- Aerostructures
- Composites

### OCCUPATIONS

- Aerospace Engineering & Operations Technologists & Technicians
- Aircraft Structure, Surfaces, Rigging, & Systems Assemblers
- Electrical & Electronic Engineering Technologists & Technicians
- Electro-Mechanical & Mechatronics Technologists & Technicians

Occupations & Degrees	Median Annual Wage
H.S. Diploma & Moderate-Term On-the-Job Training	
*Aircraft Structure, Surfaces, Rigging, & Systems Assemblers	\$61,500

\* High Demand, High Wage

#### Sources:

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

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- 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 \(ksde.org\)](http://ksde.org)
- [Tiered Technical Courses \(ksde.org\)](http://ksde.org)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](http://ksde.org)
- [Advanced Manufacturing Career Cluster \(onetonline.org\)](http://onetonline.org)
- [Advanced Manufacturing Advance CTE \(careertech.org\)](http://careertech.org)
- [Careers in Advanced Manufacturing \(MyNextMove.org\)](http://mynextmove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](http://ks.gov)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](http://ks.gov)
- [Today's Occupations \(ks.gov\)](http://ks.gov)
- [Cool Careers: Pilot \(HirePaths.com\)](http://hirepaths.com)

### STUDENT ORGANIZATION

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



- [Technology Student Association](http://tsa.org)





# Energy Pathway

This pathway prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of energy generation, storage, conversion, and distribution systems. It includes instruction in conventional and alternative/renewable energy systems, electrical power systems, and electrical system design.

## INTRODUCTORY LEVEL COURSES

- Introduction to Energy
- Introduction to Environmental Science

## TECHNICAL LEVEL COURSES

- Meteorology
- AP Environment Science
- Mechanical Power Transmission Systems
- Foundations of Electronics
- Energy Industry Fundamentals
- Energy, Power, & Society
- Wind Energy Operations
- Fundamentals of Electricity & Electronics
- Principles of Applied Engineering

## APPLICATION-LEVEL COURSES

- HVAC Technology
- Hydraulics & Pneumatics
- Workplace Experience in Energy
- Comprehensive Workplace Experience in Energy
- Advanced Electricity & Electronics
- Materials Science in Engineering

## OCCUPATIONS

- Electrical Engineers
- First-Line Supervisors of Mechanics, Installers, & Repairers

Occupations & Degrees	Median Annual Wage
H.S. Diploma & Less Than 5 Years Work Experience or Long-Term On-the-Job Training	
*First-Line Supervisors of Mechanics, Installers, & Repairers	\$74,070
Bachelor's Degree	
* Electrical Engineers	\$93,700

\* High Demand, High Wage

### Sources:

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

## HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- CareerSafe: OSHA Safety Certification (10 Hour)
- Center for Energy Workforce Development: Energy Industry Fundamentals
- IS CET: Associate Level CET Exam
- IS CET: 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 \(ksde.gov\)](#)
- [Energy & Natural Resources Career Cluster \(onetoonline.org\)](#)
- [Energy & Natural Resources Advance CTE \(careertech.org\)](#)
- [Careers in Energy & Natural Resources \(MyNextMove.org\)](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)
- [Today's Occupations \(ks.gov\)](#)
- [Wind Turbine Technician \(HirePaths.com\)](#)
- [International Society of Certified Electronics Technicians - Education Through Certification](#)
- [Center for Energy Workforce Development \(CEWD\)](#)

## STUDENT ORGANIZATION

- [Skills USA Kansas](#)



- [Technology Student Association](#)





# Engineering & Applied Mathematics

## Pathway

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

- Engineering Design
- Robotics
- Drafting/CAD
- Foundations of Electronics
- Principles of Applied Engineering

### APPLICATION-LEVEL COURSES

- Engineering Design & Development
- Digital Electronics
- Computer Integrated Manufacturing
- Civil Engineering & Architecture
- Aerospace Engineering
- Particular Topics in Engineering
- Comprehensive Workplace Experience in Engineering
- Emerging Technologies
- Workplace Experience in Engineering
- Project Management
- Materials Science in Engineering

### OCCUPATIONS

- Aerospace Engineers
- Architectural & Engineering Managers
- Electrical Engineers
- Engineering Teachers (Postsecondary)
- Engineers (All Other)
- Industrial Engineers
- Logisticians
- Mechanical Engineers

Occupations & Degrees	Median Annual Wage
<b>Bachelor's Degree</b>	
* Logisticians	\$60,790
* Engineers (All Other)	\$65,570
* Mechanical Engineers	\$83,260
* Industrial Engineers	\$93,560
* Electrical Engineers	\$93,700
* Aerospace Engineers	\$107,550
<b>Bachelor's Degree &amp; Work Experience</b>	
* Architectural and Engineering Managers	\$149,430
* High Demand, High Wage	
<b>Sources:</b>	
• <a href="#">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a>	
• <a href="#">Kansas Labor Information Center (KLIC) - High Demand Occupations (ks.gov)</a>	

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- Autodesk: User, Professional, Specialist
- CareerSafe: OSHA Safety Certification (10 Hour)
- ISCET: Associate Level CET Exam
- ISCET: 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](#)





DESIGN, PRODUCTION & REPAIR INDUSTRY

# Manufacturing

Manufacturing

## Occupation Overview

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma &amp; Moderate-Term On-the-Job Training</b>	
*Welders, Cutters, Solderers, & Brazers	\$48,150
*Inspectors, Testers, Sorters, Samplers, & Weighers	\$50,200
*Production, Planning, & Expediting Clerks	\$52,180
*Aircraft Structure, Surfaces, Rigging, & Systems Assemblers	\$61,500
<b>H.S. Diploma &amp; Long-Term On-the-Job Training</b>	
*Machinists	\$47,250
*Maintenance Workers, Machinery	\$51,140
*Industrial Machinery Mechanics	\$61,800
*Electrical Power-Line Installers & Repairers	\$97,260
<b>Bachelor's Degree</b>	
*Mechanical Engineers	\$83,260
*Industrial Engineers	\$93,560
*Electrical Engineers	\$93,700
*Industrial Production Managers	\$114,810
* High Demand, High Wage	
Source: <a href="https://www.klic.org/career-posters">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a>	





# Manufacturing

## Pathway

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

- Introduction to Welding
- Production Print Reading I
- Introduction to Skilled Trades

### TECHNICAL LEVEL COURSES

- Agricultural Welding I
- Robotics I
- Welding Processes I
- Hand & Power Tools

#### *Production Strand*

- Production Methods I
- Machine Tool Technology
- Computer-Aided Machining (CAM) I
- Drafting/CAD
- Production Print Reading II

#### *Maintenance Strand*

- Mechanical Power Transmission Systems
- Foundations of Electronics

### APPLICATION-LEVEL COURSES

- Workplace Experience in Manufacturing
- Comprehensive Workplace Experience in Manufacturing
- Agricultural Welding II
- Welding Processes II

#### *Production Strand*

- Advanced Drafting/CAD
- Advanced Materials & Fabrication
- Automated Integrated Systems
- Production Methods II
- Computer-Aid Machining (CAM) II

#### *Maintenance Strand*

- Sheet Metal Technology
- Remodeling & Building Maintenance
- HVAC Technology
- Plumbing Technology
- Electrical Technology
- Digital Electronics
- Hydraulics & Pneumatics

### OCCUPATIONS

- Coating, Painting, & Spraying Machine Setters, Operators, & Tenders
- Computer Numerically Controlled Tool Operators
- Control & Valve Installers & Repairers (Except Mechanical Door)
- Electrical, Electronic, & Electromechanical Assemblers (except Coil Winders, Tapers, & Finishers)
- Electrical & Electronic Engineering Technologists & Technicians
- Electrical Power-Line Installers & Repairers
- First-Line Supervisors of Production & Operating Workers
- Heating, Air Conditioning, & Refrigeration Mechanics & Installers
- Helpers: Production Workers
- Highway Maintenance Workers
- Industrial Machinery Mechanics
- Industrial Production Managers
- Inspectors, Testers, Sorters, Samplers, & Weighers
- Installation, Maintenance, & Repair Workers (All Other)
- Machinists
- Maintenance & Repair Workers (General)
- Maintenance Workers (Machinery)
- Miscellaneous Assemblers & Fabricators
- Mixing & Blending Machine Setters, Operators, & Tenders
- Molding, Coremaking, & Casting Machine Setters, Operators, & Tenders, Metal & Plastic
- Packaging & Filling Machine Operators & Tenders
- Production, Planning, & Expediting Clerks
- Production Workers (All Other)
- Sheet Metal Workers
- Weighers, Measurers, Checkers, & Samplers, Recordkeeping
- Welders, Cutters, Solderers, & Brazers

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma &amp; Short to Moderate-Term On-the-Job Training</b>	
Production Workers (All Other)	\$31,190
Molding, Coremaking, & Casting Machine Setters, Operators, & Tenders, Metal & Plastic	\$36,440
Helpers: Production Workers	\$37,540
Electrical, Electronic, & Electromechanical Assemblers (except Coil Winders, Tapers, & Finishers)	\$37,950
Miscellaneous Assemblers & Fabricators	\$38,250
Highway Maintenance Workers	\$38,790
Packaging & Filling Machine Operators & Tenders	\$39,690
Coating, Painting, & Spraying Machine Setters, Operators, & Tenders	\$42,640
Maintenance & Repair Workers (General)	\$43,410
Weighers, Measurers, Checkers, & Samplers, Recordkeeping	\$45,250
* Installation, Maintenance, & Repair Workers (All Other)	\$45,330
* Mixing & Blending Machine Setters, Operators, & Tenders	\$45,370
* Computer Numerically Controlled Tool Operators	\$47,240
* Machinists	\$47,250
* Welders, Cutters, Solderers, & Brazers	\$48,150
* Inspectors, Testers, Sorters, Samplers, & Weighers	\$50,200
* Maintenance Workers (Machinery)	\$51,140
* Heating, Air Conditioning, & Refrigeration Mechanics & Installers	\$51,730
* Production, Planning, & Expediting Clerks	\$52,180
* Industrial Machinery Mechanics	\$61,800
* First-Line Supervisors of Production & Operating Workers	\$68,810
* Control & Valve Installers and Repairers (except Mechanical Door)	\$76,890
* Electrical Power-Line Installers and Repairers	\$97,260
<b>Associate's Degree</b>	
* Electrical & Electronic Engineering Technologists & Technicians	\$66,370
<b>Bachelor's Degree</b>	
* Industrial Production Managers	\$114,810
* High Demand, High Wage	
<b>Sources:</b>	
• <a href="#">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a>	
• <a href="#">Kansas Labor Information Center (KLIC) – High Demand Occupations (ks.gov)</a>	

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
- ISCET: Associate Level CET Exam
- ISCET: 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.org)
- [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://tsa.org)





DESIGN, PRODUCTION & REPAIR INDUSTRY

# Transportation

Aviation Maintenance

Mobile Equipment Maintenance

## Occupation Overview

Occupations & Degrees	Median Annual Wage
<b>Short-Term On-the-Job Training</b>	
Automotive & Watercraft Service Attendants	\$29,890
Tire Repairers & Changers	\$34,700
Cleaners of Vehicles & Equipment	\$35,660
<b>H.S. Diploma &amp; Long-Term On-the-Job Training</b>	
*Automotive Body & Related Repairers	\$47,780
*Bus & Truck Mechanics & Diesel Engine Specialists	\$55,710
*Mobile Heavy Equipment Mechanics (except Engines)	\$60,570
<b>H.S. Diploma &amp; Work Experience or Nondegree Award</b>	
*Automotive Services Technicians & Mechanics	\$46,100
*First-Line Supervisors of Mechanics, Installers, & Repairers	\$74,070
*Aircraft Mechanics & Service Technicians	\$76,320
*Transportation, Storage, & Distribution Managers	\$101,350

\* High Demand, High Wage

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



# Aviation Maintenance

## Pathway

This pathway generally prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of aircraft powerplant and related systems. It includes instruction in engine inspection and maintenance, lubrication and cooling, electrical and ignition systems, carburetion, fuels and fuel systems, propeller and fan assemblies.

### INTRODUCTORY LEVEL COURSES

- Production Print Reading I
- Introduction to Skilled Trades

### TECHNICAL LEVEL COURSES

- Hand & Power Tools
- Aviation Fundamentals
- Aviation Systems

#### *Avionics Strand*

- Foundations of Electronics

#### *Airframe Strand*

- Production Method I
- Mechanical Power Transmission Systems

### APPLICATION-LEVEL COURSES

- Unmanned Aircraft Systems (UAS)
- Work Experience in Aviation
- Comprehensive Work Experience in Aviation

#### *Avionics Strand*

- Digital Electronics
- AC Electronics
- DC Electronics

#### *Airframe Strand*

- Hydraulics & Pneumatics
- Flight Training

### OCCUPATIONS

- Aircraft Mechanics & Service Technicians
- Aircraft Structure, Surfaces, Rigging, & Systems Assemblers

Occupations & Degrees	Median Annual Wage
Postsecondary Nondegree Award	
* Aircraft Mechanics & Service Technicians	\$76,320

\* High Demand, High Wage

#### Sources:

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

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- ISCT: Associate Level CET Exam
- ISCT: Electronics Systems Associate (ESA) Exam
- NC3: Data Analytics/Harnessing the Power of Data

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- Federal Aviation Administration (FAA): General Exam & Aviation Maintenance Technician Airframe
- Federal Aviation Administration (FAA): General Exam & Aviation Maintenance Technician Powerplant

### 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://www.kansasregents.org/)
- [Tiered Technical Courses \(ksde.org\)](https://www.ksde.org/)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://www.ksde.org/)
- [Supply Chain & Transportation Career Cluster \(onetonline.org\)](https://www.onetonline.org/)
- [Supply Chain & Transportation Advance CTE \(careertech.org\)](https://www.careertech.org/)
- [Careers in Supply Chain & Transportation \(MyNextMove.org\)](https://www.mynextmove.org/)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://www.ks.gov/)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://www.ks.gov/)
- [Today's Occupations \(ks.gov\)](https://www.ks.gov/)
- [International Society of Certified Electronics Technicians \(ISCET\)](https://www.iscet.org/)

### STUDENT ORGANIZATION

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



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





# Mobile Equipment Maintenance

## Pathway

This pathway generally prepares individuals to apply technical knowledge and skills in mechanic and repair technologies. Careers in the Mobile Equipment Pathway include the maintenance, repair, and servicing of vehicles and transportation facilities, as well as the refueling of mobile equipment. All transportation relies on equipment which must function as designed, whenever needed. The people in this pathway keep the equipment and machinery running while looking for more efficient, safe, and cost-effective ways to do so.

### INTRODUCTORY LEVEL COURSES

- Business Essentials
- Introduction to Skilled Trades
- Automotive Information
- Introduction to Transportation

### TECHNICAL LEVEL COURSES

#### Technology Strand I

- Entrepreneurship
- Alternative Power
- Small Engine & Powertrains I
- Engine Mechanical Repair
- Diesel Engine Technology

#### Technology Strand II

- General Service I

#### Technology Strand III

- Electronics & Electrical Systems I
- Brakes I
- Drive Train Technology
- Engine Performance I
- Steering & Suspension I
- Mobile HVAC

#### Collision Strand

- Entrepreneurship
- Auto Collision I
- Auto Refinishing

### APPLICATION-LEVEL COURSES

#### Technology Strand I

- Small Engines & Powertrains II
- Workplace Experience in Transportation
- Comprehensive Workplace Experience in Transportation

#### Technology Strand II

- General Service II
- General Service III

#### Technology Strand III

- Electronics & Electrical Systems II
- Brakes II
- Engine Performance II
- Steering and Suspension II

#### Collision Strand

- Workplace Experience in Transportation
- Comprehensive Workplace Experience in Transportation
- Auto Collision II
- Auto Refinishing II

### OCCUPATIONS

- Automotive Body & Related Repairers
- Automotive Service Technicians & Mechanics
- Automotive & Watercraft Service Attendants
- Bus & Truck Mechanics & Diesel Engine Specialists
- Cleaners of Vehicles & Equipment
- First-Line Supervisors of Mechanics, Installers, & Repairers
- Mobile Heavy Equipment Mechanics (except Engines)
- Tire Repairers & Changers
- Transportation, Storage, & Distribution Managers

Occupations & Degrees	Median Annual Wage
<b>Short-Term On-the-Job Training</b>	
Automotive & Watercraft Service Attendants	\$29,890
Tire Repairers & Changers	\$34,700
Cleaners of Vehicles & Equipment	\$35,660
<b>H.S. Diploma &amp; Long-Term On-the-Job Training</b>	
*Automotive Body & Related Repairers	\$47,780
*Bus & Truck Mechanics & Diesel Engine Specialists	\$55,710
*Mobile Heavy Equipment Mechanics (except Engines)	\$60,570
<b>H.S. Diploma &amp; Work Experience or Nondegree Award</b>	
*Automotive Services Technicians & Mechanics	\$46,100
*First-Line Supervisors of Mechanics, Installers, & Repairers	\$74,070
*Aircraft Mechanics & Service Technicians	\$76,320
*Transportation, Storage, & Distribution Managers	\$101,350

\* High Demand, High Wage

### Sources:

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

Continued on next page →



# Mobile Equipment Maintenance

## Pathway (continued)

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- ASE: Student Certification (2 areas)
- CareerSafe: OSHA Safety Certification (10 Hour)
- EPA: Section 609 - Servicing Motor Vehicle Air Conditioners & For Buying Refrigerant
- NC3: Data Analytics/Harnessing the Power of Data

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- ASE: Automobile Service Technician
- ASE: Maintenance & Light Repair
- ASE: Master Automobile Service Technician
- ASE: Mechanical & Electrical
- ASE: Non-Structural Analysis & Damage Repair
- ASE: Painting & Refinishing
- ASE: Structural Analysis & Damage Repair
- ASE: Student Certification (4 areas)
- ASE: Student Certification Diesel (4 areas)
- I-CAR: Refinish Technician (ProLevel 1)
- 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://www.kansasregents.org/excel)
- [Tiered Technical Courses \(ksde.org\)](https://www.ksde.org/tiered)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://www.ksde.org/common-career-technical-core-cte-course-competencies)
- [Supply Chain & Transportation Career Cluster \(onetonline.org\)](https://www.onetonline.org/supply-chain-transportation-career-cluster)
- [Supply Chain & Transportation Advance CTE \(careertech.org\)](https://www.careertech.org/supply-chain-transportation-advance-cte)
- [Careers in Supply Chain & Transportation \(MyNextMove.org\)](https://www.mynextmove.org/careers-in-supply-chain-transportation)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://www.ks.gov/kansas-labor-information-center-kllic-career-posters)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://www.ks.gov/kansas-labor-information-center-kllic-high-demand-occupations)
- [Today's Occupations \(ks.gov\)](https://www.ks.gov/todays-occupations)
- [Cool Careers: Heavy Equipment Technician \(HirePaths.com\)](https://www.hirepaths.com/cool-careers-heavy-equipment-technician)
- [Cool Careers: Distribution Support Specialist \(HirePaths.com\)](https://www.hirepaths.com/cool-careers-distribution-support-specialist)
- [Automotive Service \(ASE\) Entry Level Student Certification](https://www.ase.org/entry-level-student-certification)
- [Automotive Service Excellence \(ASE\)](https://www.ase.org/automotive-service-excellence)
- [Inter-Industry Conference on Auto Collision Repair \(I-CAR\)](https://www.i-car.com/inter-industry-conference-on-auto-collision-repair)

### STUDENT ORGANIZATION

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



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





# Agriculture

| Agriculture, Food & Natural Resources



## AGRICULTURE INDUSTRY

# Agriculture, Food & Natural Resources

Agricultural Technology & Mechanical Systems  
 Animal Science, Health & Related Industries  
 Diversified Agricultural Science  
 Food Products & Processing Systems  
 Natural Resources & Environmental Sustainability  
 Plant Science & Industry Operations

## Occupation Overview

Occupations & Degrees	Median Annual Wage
<b>Short-Term On-the-Job Training</b>	
Farmworkers, Farm, Ranch, & Aquacultural Animals	\$32,390
Farmworkers & Laborers, Crop, Nursery, & Greenhouse	\$34,320
Landscaping & Groundskeeping Workers	\$37,510
*Slaughterers & Meat Packers	\$45,450
<b>Moderate to Long-Term On-the-Job Training</b>	
Butchers & Meat Cutters	\$36,640
Agricultural Equipment Operators	\$43,160
*Water & Wasteland Treatment Plant & System Operators	\$45,960
<b>Bachelor's Degree or H.S. Diploma &amp; Work Experience</b>	
*Biological Technicians	\$47,140
*First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers	\$57,250
*Farmers, Ranchers, & Other Agricultural Managers	\$76,570

\* High Demand, High Wage

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





# Agricultural Technology & Mechanical Systems

## Pathway

This pathway generally prepares individuals to sell, select, and service agricultural or agribusiness technical equipment and facilities, including computers, specialized software, power units, machinery, equipment structures, and utilities. It includes instruction in agricultural power systems, planning and selecting materials for the construction of support facilities, mechanical practices associated with irrigation and water conservation, erosion control, and agricultural data processing systems.

### INTRODUCTORY LEVEL COURSES

- Introduction to Agriculture
- Agriculture Explorations I
- Agriculture Explorations II

### TECHNICAL LEVEL COURSES

- Agriscience
- Agricultural Mechanics
- Agricultural Welding I or Welding Processes I
- Small Power Systems

### APPLICATION-LEVEL COURSES

- Agricultural Internship
- Advanced Agricultural Internship
- Agribusiness Management
- Agricultural Entrepreneurship
- Agricultural Leadership & Communications
- Research in Agriculture
- Advanced Agricultural Mechanics
- Agricultural Construction
- Agricultural Welding II or Welding Processes II
- Agricultural Fabrication
- Advanced Agricultural Power
- Agricultural Engineering & Technology

### OCCUPATIONS

- Agricultural Equipment Operators
- Agricultural Sciences Teachers (Postsecondary)
- Farm Equipment Mechanics & Service Technicians
- Farmers, Ranchers, & Other Agricultural Managers

Occupations & Degrees	Median Annual Wage
H.S. Diploma & Five Years Work Experience	
Agricultural Equipment Operators	\$43,160
*Farmers, Ranchers, & Other Agricultural Managers	\$76,570

\* High Demand, High Wage

Sources:

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

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- American Welding Society: SENSE Certification (Level 1)
- CareerSafe: OSHA Safety Certification (10 Hour)
- cPass: Comprehensive Agriculture Assessment
- 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://www.ksde.org/)
- 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://www.kansasregents.org/)
- [Tiered Technical Courses \(ksde.org\)](https://www.ksde.org/)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

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

### STUDENT ORGANIZATION

- [Kansas FFA](https://www.ksde.org/)





# Animal Science, Health & Related Industries

## Pathway

This pathway focuses on the scientific principles that underlie the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products. It includes instruction in the animal sciences, animal husbandry and production, and agricultural and food products processing.

### INTRODUCTORY LEVEL COURSES

- Introduction to Agriculture
- Agriculture Explorations I
- Agriculture Explorations II

### TECHNICAL LEVEL COURSES

- Agriscience
- Animal Science
- Plant & Animal Science
- Agricultural Food Science
- Agricultural Biotechnology

### APPLICATION-LEVEL COURSES

- Agricultural Internship
- Small Animal Care
- Advanced Animal Science
- Equine Science
- Animal Health
- Agribusiness Management
- Agricultural Entrepreneurship
- Agricultural Leadership & Communications
- Research in Agriculture
- Advanced Plant & Animal Science

### OCCUPATIONS

- Animal Caretakers
- Animal Scientists
- Agricultural Technicians
- Agricultural Educators
- Animal Health Salespersons
- Animal Nutritionists
- Dairy Producers
- Equine Managers
- Farmworkers, Farm, Ranch, & Aquacultural Animals
- Feed Sales Representatives

### OCCUPATIONS *(continued)*

- Feed Sales Specialists
- Feedlot Specialists
- Livestock Buyers
- Livestock Geneticists
- Livestock Inspectors
- Livestock producers
- Meat Science Researcher
- Pet Shop Operators
- Poultry Managers
- USDA Inspectors
- Veterinarians
- Veterinary Assistants & Laboratory Animal Caretakers
- Vivarian Technicians
- Wildlife Biologists

### SOURCES

[Agriculture, Food, & Natural Resources Sample Careers \(careertech.org\)](#)

[AgExplorer \(ffa.org\)](#)

Occupations & Degrees	Median Annual Wage
H.S. Diploma & Short-Term On-the-Job Training	
Animal Caretakers	\$26,970
Farmworkers, Farm, Ranch, & Aquacultural Animals	\$32,390
Veterinary Assistants & Laboratory Animal Caretakers	\$32,760

### 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

- 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](#)

### 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 \(ksde.gov\)](#)
- [Agriculture Career Cluster \(onetoonline.org\)](#)
- [Agriculture Advance CTE \(careertech.org\)](#)
- [Careers in Agriculture \(MyNextMove.org\)](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) – High Demand Occupations \(ks.gov\)](#)
- [Today's Occupations \(ks.gov\)](#)

### STUDENT ORGANIZATION

- [Kansas FFA](#)





# Diversified Agricultural Science

## Pathway

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

- Introduction to Agriculture
- Agriculture Explorations I
- Agriculture Explorations II

### TECHNICAL LEVEL COURSES

- Agriscience
- Horticulture
- Plant & Soil Science
- Animal Science
- Plant & Animal Science
- Agricultural Food Science
- Agricultural Biotechnology
- Agricultural Mechanics
- Agricultural Welding I or Welding Processes I
- Small Power Systems
- Natural Resource Management

### APPLICATION-LEVEL COURSES

- Capstone in Agriculture
- Agricultural Internship
- Small Animal Care
- Equine Science
- Agribusiness Management
- Agricultural Entrepreneurship
- Agricultural Leadership & Communications
- Research in Agriculture
- Advanced Plant & Animal Science
- Sustainable/Alternative Agriculture
- Agricultural Construction
- Agricultural Fabrication
- Agricultural Engineering & Technology

### OCCUPATIONS

- Agricultural Sciences Teachers (Postsecondary)
- Agricultural Technicians
- Animal Scientist
- Food Scientists & Technologists
- Soil & Plant Scientists

### 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](#)
- 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 \(kansasregents.org\)](#)
- [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 \(ksde.gov\)](#)
- [Agriculture Career Cluster \(onetonline.org\)](#)
- [Agriculture Advance CTE \(careertech.org\)](#)
- [Careers in Agriculture \(MyNextMove.org\)](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)
- [Today's Occupations \(ks.gov\)](#)

### STUDENT ORGANIZATION

- [Kansas FFA](#)





# Food Products & Processing Systems

## Pathway

This pathway prepares individuals to receive, inspect, store, process, and package agricultural products in the form of human food consumables, animal or plant food, or other industrial products. It includes instruction in the nutrient and industrial properties of various agricultural products; logistics and storage procedures; chemical and mechanical processing operations; packaging; safety and health requirements; and related technical and business principles.

### INTRODUCTORY LEVEL COURSES

- Introduction to Agriculture
- Agriculture Explorations I
- Agriculture Explorations II

### TECHNICAL LEVEL COURSES

- Agriscience
- Horticulture
- Plant & Soil Science
- Animal Science
- Agricultural Food Science
- Food Science

### APPLICATION-LEVEL COURSES

- Agricultural Internship
- Advanced Agricultural Internship
- Agribusiness Management
- Agricultural Entrepreneurship
- Agricultural Leadership & Communications
- Research in Agriculture
- Advanced Food Science

### OCCUPATIONS

- Agricultural Inspectors
- Agricultural Sciences Teachers (Postsecondary)
- Butchers & Meat Cutters
- First-Line Supervisors of Farming, Fishing, & Forestry Workers
- Food Science Technicians
- Meat, Poultry, & Fish Cutters & Trimmers
- Slaughterers & Meat Packers

Occupations & Degrees	Median Annual Wage
H.S. Diploma and Short to Long-Term On-the-Job Training	
Butchers & Meat Cutters	\$36,640
Meat, Poultry, & Fish Cutters & Trimmers	\$43,790
* Slaughterers & Meat Packers	\$45,450

\* High Demand, High Wage

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

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

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

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

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

### 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://www.kansasregents.org/excel)
- [Tiered Technical Courses \(ksde.org\)](https://www.ksde.org/tiered)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

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

### STUDENT ORGANIZATION

- [Kansas FFA](https://www.ksde.org/kansas-ffa)





# Natural Resources & Environmental Sustainability

## Pathway

This pathway focuses on the studies and activities relating to the natural environment and its conservation, use, and improvement. Includes instruction in subjects such as climate, air, soil, water, land, fish and wildlife, and plant resources; in the basic principles of environmental science and natural resources management; and the recreational and economic uses of renewable and nonrenewable natural resources.

### INTRODUCTORY LEVEL COURSES

- Introduction to Agriculture
- Agriculture Explorations I
- Agriculture Explorations II

### TECHNICAL LEVEL COURSES

- Agriscience
- Wildlife & Recreation Management
- Natural Resources Management

### APPLICATION-LEVEL COURSES

- Agricultural Internship
- Advanced Agricultural Internship
- Agribusiness Management
- Agricultural Entrepreneurship
- Agricultural Leadership & Communications
- Research in Agriculture
- Sustainable/Alternative Agriculture
- Environmental Resources & Ecology

### OCCUPATIONS

- Conservation Scientist
- Environmental Engineer
- Fish & Game Officer
- Fish Hatchery Manager
- Forest & Conservation Technicians
- Forester
- Forestry & Conservation Science Teacher (Postsecondary)
- Geologist
- Water & Wastewater Treatment Plant & System Operators
- Wildlife Biologist
- Wildlife Manager

Occupations & Degrees	Median Annual Wage
H.S. Diploma and Long-Term On-the-Job Training	
*Water & Wastewater Treatment Plant & System Operators	\$45,960
* High Demand, High Wage	
Sources:	
• <a href="#">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a>	

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- CareerSafe: OSHA Safety Certification (10 Hour)
- cPass: Comprehensive Agriculture Assessment
- NC3: Data Analytics/Harnessing the Power of Data

### POSTSECONDARY ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- [KS Dept. of Agriculture: KS Agriculture Skills & Competencies](#)
- [KS Dept. of Agriculture: Pesticide Applicator \(Personal or Commercial\)](#)

### 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 \(ksde.gov\)](#)
- [Energy & Natural Resources Career Cluster \(onetonline.org\)](#)
- [Energy & Natural Resources Advance CTE \(careertech.org\)](#)
- [Careers in Energy & Natural Resources \(MyNextMove.org\)](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)
- [Today's Occupations \(ks.gov\)](#)

### STUDENT ORGANIZATION

- [Kansas FFA](#)





# Plant Science & Industry Operations

## Pathway

This pathway focuses on the scientific principles that underlie the breeding, cultivation, and production of agricultural plants, and the production, processing, and distribution of agricultural plant products. Includes instruction in the plant sciences, crop cultivation and production, and agricultural and food products processing.

### INTRODUCTORY LEVEL COURSES

- Introduction to Agriculture
- Agriculture Explorations I
- Agriculture Explorations II

### TECHNICAL LEVEL COURSES

- Agriscience
- Horticulture
- Plant & Soil Science
- Plant & Animal Science

### APPLICATION-LEVEL COURSES

- Agricultural Internship
- Advanced Agricultural Internship
- Horticulture, Floriculture & Greenhouse Management
- Nursery & Landscape Operations
- Crop & Range Management
- Agribusiness Management
- Agricultural Entrepreneurship
- Agricultural Leadership & Communications
- Research in Agriculture
- Advanced Plant & Animal Science

### OCCUPATIONS

- Agricultural Sciences Teachers (Postsecondary)
- Agricultural Technicians
- Biological Technicians
- Farm & Home Management Educators
- Farmers, Ranchers, & Other Agricultural Managers
- Farmworkers & Laborers (Crop, Nursery, & Greenhouse)
- First-Line Supervisors of Farming, Fishing, and Forestry Workers
- First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers
- Landscaping & Groundskeeping Workers
- Soil & Plant Scientists

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma and Short to Long-Term On-the-Job Training</b>	
Farmworkers & Laborers (Crop, Nursery, & Greenhouse)	\$34,320
Landscaping & Groundskeeping Workers	\$37,510
* First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers	\$57,250
<b>Bachelor's Degree</b>	
*Biological Technicians	\$47,140
* High Demand, High Wage	
<b>Sources:</b>	
• <a href="https://ks.gov">Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)</a>	

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- CareerSafe: OSHA Safety Certification (10 Hour)
- cPass: Comprehensive Agriculture Assessment
- 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.org)
- [KS Dept. of Agriculture: Pesticide Applicator \(Personal or Commercial\)](https://ksde.org)

### 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 \(ksdeegreestats.org\)](https://ksdeegreestats.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.org)
- [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://ks.gov)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://ks.gov)
- [Today's Occupations \(ks.gov\)](https://ks.gov)

### STUDENT ORGANIZATION

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





# Business

- | Business Management & Administration
- | Finance
- | Marketing



## BUSINESS INDUSTRY

# Business Management & Administration

Business Management & Entrepreneurship

## Occupation Overview

Occupations & Degrees	Median Annual Wage
Bachelor's Degree	
*Meeting, Convention, & Event Planners	\$50,930
*Human Resources Specialists	\$64,500
*Business Operations Specialists, All Other	\$79,240
Bachelor's Degree & Less Than 5 Years Work Experience	
*Training & Development Specialists	\$60,520
*Management Analysts	\$79,720
*Administrative Services	\$109,610
Bachelor's Degree & More Than 5 Years Work Experience	
*General & Operations Managers	\$85,690
*Human Resources Managers	\$127,330
*Chief Executives	\$148,910

\* High Demand, High Wage

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





# Business Management & Entrepreneurship

## Pathway

This pathway generally focuses on enterprise management and entrepreneurship. Instruction includes areas of planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. General Management focuses on careers that plan, organize, direct, and evaluate all or part of a business organization through the allocation and use of financial, human, and material resources.

### INTRODUCTORY LEVEL COURSES

- Business Essentials

### TECHNICAL LEVEL COURSES

- Business Communications
- Business Management
- Entrepreneurship

### OPTIONAL TECHNICAL LEVEL

*Supportive Business and Entrepreneurship*

- Business Law
- IB Business and Management
- Accounting
- Business Economics
- Principles of Marketing

*Supportive Entrepreneurship*

- Web Design
- 2D Animation
- Computer-Aided Machining (CAM) I
- Culinary Essentials
- General Carpentry I
- Remodel & Building Maintenance
- AgriScience
- Agricultural Welding I and/or Welding Processes I
- Foundations of Early Childhood
- Engineering Design & Development
- Drafting/CAD
- Digital Marketing
- General Service I
- Auto Collision

### APPLICATION-LEVEL COURSES

- Business Management & Entrepreneurship Workplace Experience
- Applied Business Development
- Advanced Business Management & Entrepreneurship Workplace Experience

### OCCUPATIONS

- Administrative Services Managers
- Business Operations Specialists (All Other)
- Chief Executives
- First-Line Supervisors of Office & Administrative Support Workers
- General & Operations Managers
- Human Resources Managers
- Human Resources Specialists
- Management Analysts
- Managers (All Other)
- Meeting, Convention, & Event Planners
- Project Management Specialists & Business Operations Specialists
- Training & Development Specialists

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- Adobe: Illustrator
- CareerSafe: OSHA Safety Certification (10 Hour)
- Intuit: QuickBooks Certified User
- MBA Research (ASK): Concepts of Business Management
- MBA Research (ASK): Concepts of Entrepreneurship
- MBA Research (ASK): Fundamental Business Concepts Certification
- Microsoft (MOS): Access
- Microsoft (MOS) Excel
- Microsoft (MOS) PowerPoint
- Microsoft (MOS) Word
- NC3: Data Analytics/Harnessing the Power of Data

Occupations & Degrees	Median Annual Wage
H.S. Diploma	
* First-Line Supervisors of Office & Administrative Support Workers	\$58,910
Bachelor's Degree	
* Meeting, Convention, & Event Planners	\$50,930
* Human Resources Specialists	\$64,500
Business Operations Specialists (All Other)	\$79,240
Bachelor's Degree & Work Experience	
* Training and Development Specialists	\$60,520
* Management Analysts	\$79,720
* General & Operations Managers	\$85,690
* Administrative Services Managers	\$109,610
* Managers (All Other)	\$113,840
* Human Resources Managers	\$127,330
* Chief Executives	\$148,910
* High Demand, High Wage	

### Sources:

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

### 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 \(ksde.gov\)](#)
- [Management & Entrepreneurship Career Cluster \(onetoonline.org\)](#)
- [Management & Entrepreneurship Advance CTE \(careertech.org\)](#)
- [Careers in Management & Entrepreneurship \(MyNextMove.org\)](#)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](#)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](#)
- [Today's Occupations \(ks.gov\)](#)

### STUDENT ORGANIZATION

- [Business Professionals of America](#)



- [Kansas DECA](#)



- [Future Business Leaders of America](#)





BUSINESS INDUSTRY

# Finance

Business Finance

## Occupation Overview

Occupations & Degrees	Median Annual Wage
H.S. Diploma & Short-Term On-the-Job Training	
Tellers	\$35,000
Loan Interviewers & Clerks	\$45,160
H.S. Diploma & Moderate to Long-Term On-the-Job Training	
Bill & Account Collectors	\$41,010
*Payroll & Timekeeping Clerks	\$49,690
*Insurance Sales Agents	\$59,720
*Claims Adjusters, Examiners, & Investigators	\$74,340
Bachelor's Degree	
*Accountants & Auditors	\$75,870
*Loan Officers	\$76,920
*Personal Financial Advisors	\$78,290
*Financial & Investment Analysts	\$79,190
*Financial Managers	\$134,770

\* High Demand, High Wage

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



# Business Finance

## Pathway

This pathway generally prepares individuals to plan, manage, and analyze the financial and monetary aspects and performance of business enterprises, banking institutions, or other organizations. It includes instruction in principles of accounting, financial instruments, capital planning, funds acquisition, asset and debt management, budgeting, financial analysis, and investments and portfolio management. The business finance function in a company is to manage policy and strategy for (and the implementation of) capital structure, budgeting, acquisition and investment, financial modeling and planning, funding, dividends, and taxation.

### INTRODUCTORY LEVEL COURSES

- Business Essentials

### TECHNICAL LEVEL COURSES

- Accounting

#### Optional Supportive Courses

- Business Communications
- Entrepreneurship
- Business Law
- Business Economics
- Applied Business Technology Applications

### APPLICATION-LEVEL COURSES

#### Financial Institutions & Services Strand

- Banking & Finance
- Risk Management & Insurance
- Investing

#### Accounting Strand

- Advanced Accounting
- College Accounting

#### Optional Supportive Courses

- Workplace Experience in Finance
- Advanced Workplace Experience in Finance

### OCCUPATIONS

- Accountants & Auditors
- Appraisers of Personal & Business Property
- Bill & Account Collectors
- Bookkeeping, Accounting, & Auditing Clerks
- Budget Analysts
- Business Teachers (Postsecondary)
- Buyers & Purchasing Agents
- Claims Adjusters, Examiners, & Investigators
- Compliance Officers
- Compensation, Benefits, & Job Analysts Specialists
- Credit Analysts

### OCCUPATIONS *(continued)*

- Financial & Investment Analysts
- Financial Managers
- Financial Risk Specialists
- Financial Specialists (All Other)
- Insurance Sales Agents
- Loan Interviewers & Clerks
- Loan Officers
- Payroll & Timekeeping Clerks
- Personal Financial Advisors
- Securities, Commodities, & Financial Services Sales Agents
- Tax Preparers
- Tellers

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- CareerSafe: OSHA Safety Certification (10 Hour)
- Fundamental Payroll Certification (FPC)
- Intuit: QuickBooks Certified User
- MBA Research (ASK): Concepts of Finance
- Microsoft (MOS): Access
- Microsoft (MOS) Excel
- Microsoft (MOS) PowerPoint
- Microsoft (MOS) Word
- 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 \(kansasregents.org\)](https://www.kansasregents.org/excel)
- [Tiered Technical Courses \(ksde.org\)](https://www.ksde.org/tiered-technical-courses)

Occupations & Degrees	Median Annual Wage
<b>H.S. Diploma</b>	
Tellers	\$35,000
Tax Preparers	\$45,160
Bill & Account Collectors	\$38,980
Loan Interviewers & Clerks	\$41,010
* Payroll & Timekeeping Clerks	\$59,720
* Insurance Sales Agents	\$49,690
* Claims Adjusters, Examiners, & Investigators	\$74,340
<b>Some College &amp; Moderate-Term Training</b>	
Bookkeeping, Accounting, & Auditing Clerks	\$43,580
<b>Bachelor's Degree</b>	
* Buyers & Purchasing Agents	\$63,370
* Compliance Officers	\$63,490
* Securities, Commodities, & Financial Services Sales Agents	\$72,310
* Accountants & Auditors	\$75,870
* Loan Officers	\$76,920
* Personal Financial Advisors	\$78,290
* Financial & Investment Analysts	\$79,190
* Financial Managers	\$134,770
* High Demand, High Wage	

### Sources:

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

### POSTSECONDARY PROGRAMS

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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](https://www.ksde.org/common-career-technical-core-cte-course-competencies)
- [Financial Services Career Cluster \(onetonline.org\)](https://www.onetonline.org/financial-services-career-cluster)
- [Financial Services Advance CTE \(careertech.org\)](https://www.career-tech.org/financial-services-advance-cte)
- [Careers in Financial Services \(MyNextMove.org\)](https://www.mynextmove.org/careers-in-financial-services)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](https://www.ks.gov/kLIC)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](https://www.ks.gov/kLIC)
- [Today's Occupations \(ks.gov\)](https://www.ks.gov/todays-occupations)

### STUDENT ORGANIZATION

- [Business Professionals of America](https://www.businessprofessionals.org)



- [Kansas DECA](https://www.deca.org)



- [Future Business Leaders of America](https://www.futurebusinessleaders.org)





BUSINESS INDUSTRY

# Marketing

Marketing

## Occupation Overview

Occupations & Degrees	Median Annual Wage
<b>Short-Term On-the-Job Training</b>	
Cashiers	\$26,890
Retail Salesperson	\$30,750
Counter and Rental Clerks	\$36,840
Customer Service Representatives	\$37,190
<b>H.S. Diploma &amp; Moderate-Term On-the-Job Training</b>	
*Real Estate Sales Agents	\$54,300
Sales Representatives of Services *(except Advertising, Insurance, Financial Services, & Travel)	\$63,420
Wholesale & Manufacturing Sales *Representatives (except Technical & Scientific Products)	\$71,340
<b>H.S. Diploma &amp; Work Experience or Nondegree Award</b>	
*Public Relations Specialists	\$60,020
*Market Research Analysts & Marketing Specialists	\$61,220
*Marketing Managers	\$130,590
*Sales Managers	\$147,800

\* High Demand, High Wage

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



# Marketing

## Pathway

This pathway generally prepares individuals to provide analytical descriptions of consumer behavior patterns and market environments to marketing managers and other business decision-makers. It includes instruction in survey research methods, research design, new product test marketing, exploratory marketing, consumer needs and preferences analysis, geographic analysis, and applications to specific products and markets. Employees in marketing research are concerned with understanding people and organizations. They collect and analyze many different types of information to design new products, to predict future sales and to position their own company's strategies against those of its competitors.

### INTRODUCTORY LEVEL COURSES

- Business Essentials

### TECHNICAL LEVEL COURSES

- Business Communications
- Principles of Marketing

#### Optional Supportive Courses

- Web Design
- 2D Animation
- Business Management
- Entrepreneurship
- IB Business & Management
- Accounting
- Business Economics
- Sports/Entertainment Marketing
- Principles of Advertising
- Graphic Design I
- Applied Business Technology Applications
- Digital Marketing

### APPLICATION-LEVEL COURSES

- Marketing Applications

#### Optional Supportive Courses

- Marketing Management
- Integrated Marketing Applications
- Marketing Research
- Marketing Workplace Experience
- Advanced Marketing Workplace Experience
- Marketing Communications

### OCCUPATIONS

- Business Teachers (Postsecondary)
- Cashiers
- Counter & Rental Clerks
- Customer Service Representatives
- Driver/Sales Workers
- First-Line Supervisors of Retail Sales Workers
- Market Research Analysts & Marketing Specialists

### OCCUPATIONS (continued)

- Marketing Managers
- Merchandise Displayers & Window Trimmers
- Parts Salespersons
- Property, Real Estate, & Community Association Managers
- Public Relations Specialists
- Real Estate Sales Agents
- Retail Salespersons
- Sales Managers
- Sales Representatives of Services (except Advertising, Insurance, Financial Services, & Travel)
- Survey Researchers
- Wholesale & Manufacturing Sales Representatives (except Technical & Scientific Products)
- Wholesale & Manufacturing Sales Representatives (Technical & Scientific Products)

### HIGH SCHOOL ASSESSMENTS, CREDENTIALS, OR CERTIFICATIONS

- Adobe: Campaign Business Practitioner
- Adobe: Dreamweaver
- Adobe: Illustrator
- Adobe: Media Optimizer
- CareerSafe: OSHA Safety Certification (10 Hour)
- Facebook: Blueprint
- Google: Analytics
- Intuit: QuickBooks Certified User
- MBA Research (ASK): Fundamental Marketing Concepts
- Microsoft (MOS): Access
- Microsoft (MOS) Excel
- Microsoft (MOS) PowerPoint
- Microsoft (MOS) Word
- NC3: Data Analytics/Harnessing the Power of Data

Occupations & Degrees	Median Annual Wage
H.S. Diploma	
Cashiers	\$26,890
Retail Salespersons	\$30,750
Merchandise Displayers & Window Trimmers	\$36,710
Parts Salespersons	\$36,750
Counter & Rental Clerks	\$36,840
Driver/Sales Workers	\$36,970
Customer Service Representatives	\$37,190
* First-Line Supervisors of Retail Sales Workers	\$46,310
* Property, Real Estate, & Community Association Managers	\$48,880
* Real Estate Sales Agents	\$54,300
* Sales Representatives of Services (except Advertising, Insurance, Financial Services, & Travel)	\$63,420
* Wholesale & Manufacturing Sales Representatives (except Technical & Scientific Products)	\$71,340
Bachelor's Degree	
* Public Relations Specialists	\$60,020
* Market Research Analysts & Marketing Specialists	\$61,220
* Wholesale & Manufacturing Sales Representatives (Technical & Scientific Products)	\$119,360
* Marketing Managers	\$130,590
* Sales Managers	\$147,800
* High Demand, High Wage	
Sources:	
• Kansas Labor Information Center (KLIC) - Career Posters (ks.gov)	
• Kansas Labor Information Center (KLIC) - High Demand 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.

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- [Tiered Technical Courses \(ksde.org\)](http://ksde.org)

### POSTSECONDARY PROGRAMS

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

### RESOURCES

- [Common Career Technical Core & CTE Course Competencies \(ksde.gov\)](http://ksde.org)
- [Marketing & Sales Career Cluster \(onetonline.org\)](http://onetonline.org)
- [Marketing & Sales Advance CTE \(careertech.org\)](http://careertech.org)
- [Careers in Marketing & Sales \(MyNextMove.org\)](http://MyNextMove.org)
- [Kansas Labor Information Center \(KLIC\) - Career Posters \(ks.gov\)](http://ks.gov)
- [Kansas Labor Information Center \(KLIC\) - High Demand Occupations \(ks.gov\)](http://ks.gov)
- [Today's Occupations \(ks.gov\)](http://ks.gov)

### STUDENT ORGANIZATION

- [Business Professionals of America](http://bpa.org)



- [Kansas DECA](http://ksdeca.org)



- [Future Business Leaders of America](http://fblla.org)





# Kansas State Board of Education

## Board Members

900 S.W. Jackson Street, Suite 600  
Topeka, Kansas 66612-1212  
(785) 296-3203

[www.ksde.gov/board](http://www.ksde.gov/board)

## 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

### DISTRICT 1



Danny Zeck  
Vice Chair  
[Danny.Zeck@ksde.gov](mailto:Danny.Zeck@ksde.gov)

### DISTRICT 2



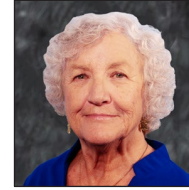
Melanie Haas  
[Melanie.Haas@ksde.gov](mailto:Melanie.Haas@ksde.gov)

### DISTRICT 3



Michelle Dombrosky  
[Michelle.Dombrosky@ksde.gov](mailto:Michelle.Dombrosky@ksde.gov)

### DISTRICT 4



Connie O'Brien  
[Connie.O'brien@ksde.gov](mailto:Connie.O'brien@ksde.gov)

### DISTRICT 5



Cathy Hopkins  
Chair  
[Cathy.Hopkins@ksde.gov](mailto:Cathy.Hopkins@ksde.gov)

### DISTRICT 6



Dr. Beryl A. New  
[Beryl.New@ksde.gov](mailto:Beryl.New@ksde.gov)

### DISTRICT 7



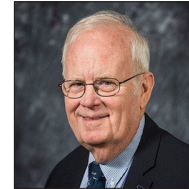
Dennis Hershberger  
[Dennis.Hershberger@ksde.gov](mailto:Dennis.Hershberger@ksde.gov)

### DISTRICT 8



Betty Arnold  
[Betty.Arnold@ksde.gov](mailto:Betty.Arnold@ksde.gov)

### DISTRICT 9



Jim Porter  
[Jim.Porter@ksde.gov](mailto:Jim.Porter@ksde.gov)

### DISTRICT 10



Debby Potter  
[Debby.Potter@ksde.gov](mailto:Debby.Potter@ksde.gov)

### COMMISSIONER OF EDUCATION



Dr. Randy Watson  
[Randy.Watson@ksde.gov](mailto:Randy.Watson@ksde.gov)

### DEPUTY COMMISSIONER

Division of Fiscal & Administrative Services



Dr. Frank Harwood  
[Frank.Harwood@ksde.gov](mailto:Frank.Harwood@ksde.gov)

### DEPUTY COMMISSIONER

Division of Learning Services



Dr. Ben Proctor  
[Ben.Proctor@ksde.gov](mailto:Ben.Proctor@ksde.gov)

The Kansas State Department of Education does not discriminate on the basis of race, color, religion, national origin, sex, disability or age in its programs and activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: KSDE General Counsel, Office of General Counsel, KSDE, Landon State Office Building, 900 S.W. Jackson, Suite 102, Topeka, KS 66612, (785) 296-3201.

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

Jan. 25, 2025

## 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

