

# Kansas Career Cluster Guidance Handbook 2024-2025

KANSAS CAREER AND TECHNICAL EDUCATION  
KANSAS CAREER CLUSTER PATHWAY  
DESIGN MODELS



# KANSAS CAREER CLUSTER GUIDANCE HANDBOOK 2024-2025

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# Kansas Career and Technical Education



Organized educational activities that offer a sequence of courses that provide individuals with 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. The academic skills shall be, at the secondary level, aligned with the challenging state academic standards adopted by the Elementary and Secondary Education Act (ESEA). It provides technical skill proficiency leading to an industry-recognized credential, a certificate, or an associate degree and may include prerequisite courses (other than a remedial course) that meet the other requirements; and include competency-based, work-based or other applied learning that supports the development of academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual.<sup>1</sup>

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<sup>1</sup> [Section 3 (5) Carl D. Perkins Career and Technical Education Act of 2006 [Public Law 88-210; Dec. 18, 1963] [As Amended Through Strengthening Career and Technical Education for the 21st Century Act, P.L. 116-6, Enacted Feb. 15, 2019]



# Kansas CTE Career Pathways Infographics

The following three pages contain the Kansas College and Technical Education (CTE) Career pathways infographics.



## Elementary Version

- Seven Career Fields.



## Middle School Version

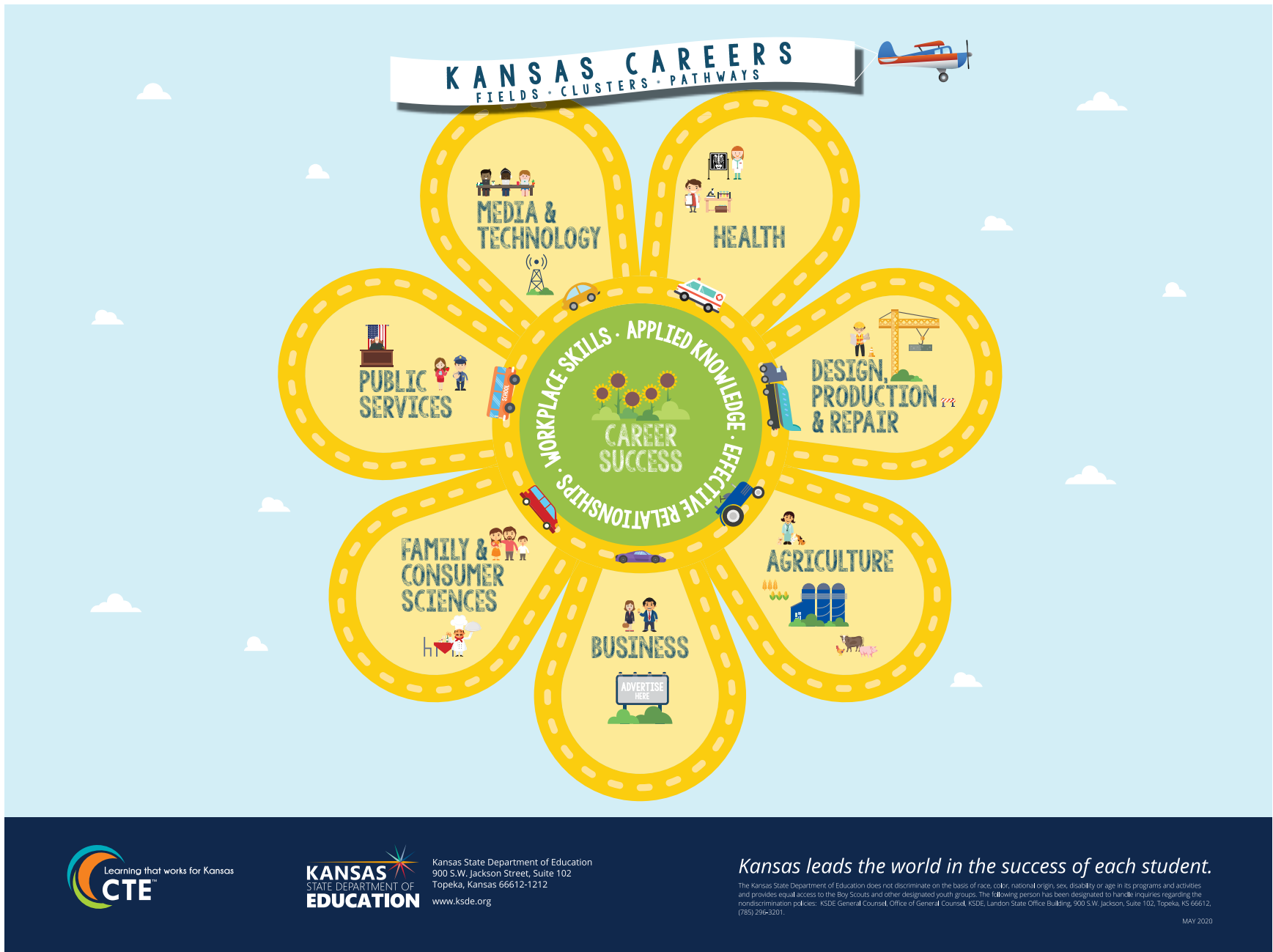
- Seven Career Fields.
- Sixteen Career Clusters.



## Secondary Version

- Seven Career Fields.
- Sixteen Career Clusters.
- Thirty-six Pathways of study.

# Elementary School Level Graphic



Kansas State Department of Education  
900 S.W. Jackson Street, Suite 102  
Topeka, Kansas 66612-1212  
[www.ksde.org](http://www.ksde.org)

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

The Kansas State Department of Education does not discriminate on the basis of race, color, 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.

MAY 2020

# Middle School Level Graphic



**KANSAS STATE DEPARTMENT OF EDUCATION**  
Kansas State Department of Education  
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Topeka, Kansas 66612-1212  
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MAY 2020

# Secondary School Level Graphic



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MAY 2020

All infographics and career cluster information available online here:

<https://www.ksde.org/Agency/Division-of-Learning-Services/Career-Standards-and-Assessment-Services/CSAS-Home/Career-Technical-Education-CTE/Career-Clusters-Pathways>



# KANSAS CAREER CLUSTER GUIDANCE HANDBOOK 2024-2025

## KSDE Secondary Level CTE Contacts

### CAREER AND TECHNICAL EDUCATION

OFFICE	NAME	PHONE	EMAIL
CTE Assistant Director	Natalie Clark	(785) 296-4351	<a href="mailto:ndclark@ksde.org">ndclark@ksde.org</a>
Senior Administrative Assistant	Barbara Bahm	(785) 291-3538	<a href="mailto:bbahm@ksde.org">bbahm@ksde.org</a>

### CLUSTER/PATHWAYS

CLUSTER/PATHWAY	NAME	PHONE	EMAIL
Agriculture, Food and Natural Resources	Guy Shoulders	(785) 296-3956	<a href="mailto:gshoulders@ksde.org">gshoulders@ksde.org</a>
Architecture and Construction	Kevin Bronson	(785) 296-6214	<a href="mailto:kbronson@ksde.org">kbronson@ksde.org</a>
Arts, A/V Technology and Communications	Eryn Knecht	(785) 296-2221	<a href="mailto:eknecht@ksde.org">eknecht@ksde.org</a>
Business Management and Administration	Kathy Camarena	(785) 296-3152	<a href="mailto:kcamarena@ksde.org">kcamarena@ksde.org</a>
Education and Training	Taylor Spangler	(785) 296-2307	<a href="mailto:tspangler@ksde.org">tspangler@ksde.org</a>
Engineering	Kevin Bronson	(785) 296-6214	<a href="mailto:kbronson@ksde.org">kbronson@ksde.org</a>
Finance	Kathy Camarena	(785) 296-3152	<a href="mailto:kcamarena@ksde.org">kcamarena@ksde.org</a>
Government and Public Administration	Kathy Camarena	(785) 296-3152	<a href="mailto:kcamarena@ksde.org">kcamarena@ksde.org</a>
Health and Bio Sciences	Eryn Knecht	(785) 296-2221	<a href="mailto:eknecht@ksde.org">eknecht@ksde.org</a>
Hospitality and Tourism	Taylor Spangler	(785) 296-2307	<a href="mailto:tspangler@ksde.org">tspangler@ksde.org</a>
Human Services	Taylor Spangler	(785) 296-2307	<a href="mailto:tspangler@ksde.org">tspangler@ksde.org</a>
Information Technology	Stephen King	(785) 296-7285	<a href="mailto:sking@ksde.org">sking@ksde.org</a>
Law, Public Safety, Corrections and Security	Kevin Bronson	(785) 296-6214	<a href="mailto:kbronson@ksde.org">kbronson@ksde.org</a>
Manufacturing	Kevin Bronson	(785) 296-6214	<a href="mailto:kbronson@ksde.org">kbronson@ksde.org</a>
Marketing	Kathy Camarena	(785) 296-3152	<a href="mailto:kcamarena@ksde.org">kcamarena@ksde.org</a>
Transportation, Distribution and Logistics	Kevin Bronson	(785) 296-6214	<a href="mailto:kbronson@ksde.org">kbronson@ksde.org</a>

### CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

CTSO	NAME	PHONE	EMAIL
Business Professionals of America (BPA)	Marcy Cross	(316) 794-4190	<a href="mailto:mcross@goddardusd.com">mcross@goddardusd.com</a>
DECA	To be announced		
Future Business Leaders of America (FBLA)	Connie Lindell	(785) 760-1038	<a href="mailto:conniefbla@gmail.com">conniefbla@gmail.com</a>
Family, Career and Community Leaders of America (FCCLA)	Shandi Andres	(785) 532-5510	<a href="mailto:sdandres@ksu.edu">sdandres@ksu.edu</a>
Future Farmers of America (FFA)	Guy Shoulders	(785) 296-3956	<a href="mailto:gshoulders@ksde.org">gshoulders@ksde.org</a>
FFA Executive Secretary	Mary Kane	(785) 532-6424	<a href="mailto:mrkane@k-state.edu">mrkane@k-state.edu</a>
HOSA Future Health Professionals	Tina Goosz	(620) 235-4040	<a href="mailto:tgoosz@kumc.edu">tgoosz@kumc.edu</a>
SkillsUSA	Becky Warren	(620) 820-9367	<a href="mailto:bwarren@ksde.org">bwarren@ksde.org</a>
Technology Student Association (TSA)	Ruth DeLange	(620) 366-3388	<a href="mailto:tsakansas@gmail.com">tsakansas@gmail.com</a>

### CARL D. PERKINS\*

TITLE	NAME	PHONE	EMAIL
Lead	Helen Swanson	(785) 296-4912	<a href="mailto:hswanson@ksde.org">hswanson@ksde.org</a>
Office of Civil Rights Visits	Andy Ewing	(785) 296-3860	<a href="mailto:aewing@ksde.org">aewing@ksde.org</a>
Senior Administrative Assistant	Joyce Broils	(785) 296-6770	<a href="mailto:jbroils@ksde.org">jbroils@ksde.org</a>

\* Perkins Reserve Grant Management- see appropriate pathway consultant.

### RELATED AREAS

AREA	NAME	PHONE	EMAIL
K-12 Career Development	Kent Reed	(785) 296-8109	<a href="mailto:kreed@ksde.org">kreed@ksde.org</a>
Kansas Course Code Management System (KCCMS)			<a href="mailto:kccms@ksde.org">kccms@ksde.org</a>
Kansas Individual Data on Students (KIDS)			<a href="mailto:kids@ksde.org">kids@ksde.org</a>
Pathways Authenticated Application Assistance			<a href="mailto:pathwayshelpdesk@ksde.org">pathwayshelpdesk@ksde.org</a>
KIDS Student Course Data Submission (KCAN)			<a href="mailto:kids@ksde.org">kids@ksde.org</a>
Educator Data Collection System (EDCS)	Shane Carter	(785) 296-2289	<a href="mailto:scarter@ksde.org">scarter@ksde.org</a>



# Kansas Career Cluster Pathways

## Pathway Classification of Instructional Program (CIP) Codes



### Agriculture, Food and Natural Resources

Agribusiness Systems	01.0101
Comprehensive Agriculture Science	01.9999
Animal Science	01.0901
Biotechnology in Agriculture	26.1201
Food Products and Processing Systems	01.0401
Natural Resources and Environmental Systems	03.0101
Plant Systems	01.1101
Power, Structural and Technical Systems	01.0201



### Architecture and Construction

Construction and Design	46.0000
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### Arts, A/V Technology and Communications

Digital Media	09.0702
Graphic Design	50.0499



### Business Management and Administration

Business Management and Entrepreneurship	52.0799
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### Education and Training

Teaching/Training	13.0101
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### Engineering

Aviation Production	15.0000
Energy	17.2071
Engineering and Applied Mathematics	14.0101



### Finance

Business Finance	52.0801
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### Government and Public Administration

Government and Public Administration	44.0401
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### Health and Bio Sciences

Biochemistry	14.1401
Biomedical	14.0501
Health Science	51.9999



### Hospitality and Tourism

Restaurant and Event Management	12.0504
Travel and Tourism	52.0901



### Human Services

Early Childhood Development and Services	19.0709
Family, Community and Consumer Services	19.0799
Fashion, Apparel, Interior Design (FAID)	19.0999



### Information Technology

Information Support and Services	11.0301
Network Systems	11.0901
Programming and Software Development	11.0201
Web and Digital Communications	11.1004



### Law, Public Safety, Corrections and Security

Corrections, Security, Law and Law Enforcement Services	43.0199
Emergency and Fire Management Services	43.0299



### Manufacturing

Manufacturing	48.0000
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### Marketing

Marketing	52.1402
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### Transportation, Distribution and Logistics

Aviation Maintenance	47.0608
Mobile Equipment Maintenance	47.9999

 Nontraditional female pathway.  
 Nontraditional male pathway.

AGRICULTURE, FOOD AND NATURAL RESOURCES CAREER CLUSTER DESIGN

# Agribusiness Systems Pathway

CIP CODE 01.0101

**APPROVED PATHWAY:**

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

**INTRODUCTORY LEVEL**

Title	Code	Credit
* ● Introduction to Agriculture	18001	1
* ● Exploratory Agriculture	68001	1

**TECHNICAL LEVEL**

Title	Code	Credit
Agriscience	18002	1
* Agribusiness	18201	1

**APPLICATION LEVEL**

Title	Code	Credit
Internship	18048	1
Advanced Internship	18049	1
* Applications in Agribusiness	18220	1
Agricultural Entrepreneurship	18202	1
Agricultural Leadership and Communications	18203	1
Research in Agriculture	18206	1

- \* Required courses in pathway approval.
- Must choose **ONE** of the required courses in Introductory Level for pathway approval.

# Comprehensive Agricultural Science Pathway

CIP CODE 01.9999

## APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

## INTRODUCTORY LEVEL

Title	Code	Credit
* ● Introduction to Agriculture	18001	1
* ● Exploratory Agriculture	68001	1

## TECHNICAL LEVEL

Must choose at least **TWO** of the courses in this level.

Title	Code	Credit
Agriscience	18002	1
Horticulture	18052	1
Plant and Soil Science	18058	1
Animal Science	18101	1
Plant and Animal Science	18301	1
Agricultural Food Science	18305	1
Biotechnology in Agriculture	18308	1
Natural Resource Management	18504	1

## APPLICATION LEVEL

Title	Code	Credit
Internship	18048	1
Advanced Internship	18049	1
Agricultural Business	18201	1
Agricultural Entrepreneurship	18202	1
Agricultural Leadership and Communications	18203	1
Research in Agriculture	18206	1
Advanced Plant and Animal Science	18302	1

- \* Required courses in pathway approval.
- Must choose **ONE** of the required courses in Introductory Level for pathway approval.

## AGRICULTURE, FOOD AND NATURAL RESOURCES CAREER CLUSTER DESIGN

# Animal Science Pathway

CIP CODE 01.0901

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
* ● Introduction to Agriculture	18001	1
* ● Exploratory Agriculture	68001	1

### TECHNICAL LEVEL

Title	Code	Credit
Agriscience	18002	1
* Animal Science	18101	1

### APPLICATION LEVEL

Title	Code	Credit
● Advanced Animal Science	18103	1
● Equine Science	18104	1
● Small Animal Care	18102	1
● Animal Health/Vet Tech	18105	1
Research in Agriculture	18206	1
Agricultural Entrepreneurship	18202	1
Agricultural Leadership and Communications	18203	1
Advanced Internship	18049	1
Agricultural Business	18201	1
Internship	18048	1

- \* Required courses in pathway approval.
- Must choose **ONE** Application Level course for pathway approval.

AGRICULTURE, FOOD AND NATURAL RESOURCES CAREER CLUSTER DESIGN

# Biotechnology in Agriculture Pathway

CIP CODE 26.1201

## APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
* ● Introduction to Agriculture	18001	1
* ● Exploratory Agriculture	68001	1

### TECHNICAL LEVEL

Title	Code	Credit
Agriscience	18002	1
Agricultural Food Science	18305	1
Animal Science	18101	1
* Biotechnology in Agriculture	18308	1
Horticulture	18052	1
Plant and Soil Science	18058	1

### APPLICATION LEVEL

Title	Code	Credit
Agricultural Business	18201	1
Agricultural Entrepreneurship	18202	1
Agricultural Leadership and Communications	18203	1
* Applications in Biotechnology	18320	1
Research in Agriculture	18206	1
Internship	18048	1
Advanced Internship	18049	1

- \* Required courses in pathway approval.
- Must choose **ONE** Application Level course for pathway approval.

AGRICULTURE, FOOD AND NATURAL RESOURCES CAREER CLUSTER DESIGN

# Food Products and Processing Systems Pathway

CIP CODE 01.0401

**APPROVED PATHWAY:**

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

**INTRODUCTORY LEVEL**

Title	Code	Credit
* ● Introduction to Agriculture	18001	1
* ● Exploratory Agriculture	68001	1

**TECHNICAL LEVEL**

Title	Code	Credit
Agriscience	18002	1
Horticulture	18052	1
Plant and Soil Science	18058	1
Animal Science	18101	1
* ● Agricultural Food Science	18305	1
* ● Food Science	19254	1

**APPLICATION LEVEL**

Title	Code	Credit
Internship	18048	1
Advanced Internship	18049	1
Agricultural Business	18201	1
Agricultural Entrepreneurship	18202	1
Agricultural Leadership and Communications	18203	1
Research in Agriculture	18206	1
* Advanced Food Science	18317	1

- \* Required courses in pathway approval.
- Must choose **ONE** of these Application Level courses and of these **ONE** Technical Level courses for pathway approval.



AGRICULTURE, FOOD AND NATURAL RESOURCES CAREER CLUSTER DESIGN

# Natural Resources and Environmental Systems Pathway

CIP CODE 03.0101

**APPROVED PATHWAY:**

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

• **INTRODUCTORY LEVEL**

Title	Code	Credit
* Introduction to Agriculture	18001	1
* Exploratory Agriculture	68001	1

• **TECHNICAL LEVEL**

Title	Code	Credit
Agriscience	18002	1
* Natural Resources Management	18504	1

• **APPLICATION LEVEL**

Title	Code	Credit
Internship	18048	1
Advanced Internship	18049	1
Agricultural Business	18201	1
Agricultural Entrepreneurship	18202	1
Agricultural Leadership and Communications	18203	1
Research in Agriculture	18206	1
* Environmental Resources and Wildlife Science	37506	1

- \* Required courses in pathway approval.
- A minimum of **ONE** course from each level is required for pathway approval.

# AGRICULTURE, FOOD AND NATURAL RESOURCES CAREER CLUSTER DESIGN

## Plant Systems Pathway

CIP CODE 01.1101

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
* ● Introduction to Agriculture	18001	1
* ● Exploratory Agriculture	68001	1

### TECHNICAL LEVEL

Title	Code	Credit
Agriscience	18002	1
* ● Horticulture	18052	1
* ● Plant and Soil Science	18058	1

### APPLICATION LEVEL

Title	Code	Credit
Internship	18048	1
Advanced Internship	18049	1
* ● Floriculture and Greenhouse Management	18057	1
* ● Applications in Horticulture	18071	1
* ● Crop and Range Management	18081	1
Agricultural Business	18201	1
Agricultural Entrepreneurship	18202	1
Agricultural Leadership and Communications	18203	1
Research in Agriculture	18206	1

- \* Required courses in pathway approval.
- Must choose **ONE** of the required courses in each level for pathway approval.

AGRICULTURE, FOOD AND NATURAL RESOURCES CAREER CLUSTER DESIGN

# Power, Structural and Technical Systems Pathway

CIP CODE 01.0201

**APPROVED PATHWAY:**

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

**INTRODUCTORY LEVEL**

Title	Code	Credit
* ● Introduction to Agriculture	18001	1
* ● Exploratory Agriculture	68001	1

**TECHNICAL LEVEL**

Title	Code	Credit
Agriscience	18002	1
* ● Agricultural Mechanics	18401	1
* ● Agricultural Welding I	18404/39207	1
* ● Small Engines	18410	1

**APPLICATION LEVEL**

Title	Code	Credit
Internship	18048	1
Advanced Internship	18049	1
Agricultural Business	18201	1
Agricultural Entrepreneurship	18202	1
Agricultural Leadership and Communications	18203	1
Research in Agriculture	18206	1
* ● Advanced Agricultural Mechanics	18402	1
* ● Agricultural Structures	18403	1
* ● Agricultural Welding II	18407/39208	1
* ● Agricultural Fabrication	18409	1
* ● Advanced Agricultural Power	18411	1

- \* Required courses in pathway approval.
- Must choose **ONE** of the required courses in each level for pathway approval.

# ARCHITECTURE AND CONSTRUCTION CAREER CLUSTER DESIGN

## Construction and Design Pathway

CIP CODE 46.0000



### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
Drafting	21102	0.5
Production Blueprint Reading	21108	0.5
Introduction to Industrial Technology	38001	0.5

### TECHNICAL LEVEL

#### DESIGN STRAND

Title	Code	Credit
Interior Design I	19263	0.5
Architecture Design	21103	1
Drafting/CAD	21107	1
Interior Design II	22212	0.5

#### CONSTRUCTION STRAND

Title	Code	Credit
Carpentry	17002	1
Woodworking Principles	17007	1
Skilled Mechanical Crafts	17062	0.5

### APPLICATION LEVEL

#### DESIGN STRAND

Title	Code	Credit
Research and Design for Preconstruction	21109	1
Advanced Studies	38050	0.5
Workplace Experience in Architecture and Construction	38100	0.5
Comprehensive Workplace Experience in Architecture and Construction	38110	1
Interior Architectural Design	38212	0.5

#### CONSTRUCTION STRAND

Title	Code	Credit
# Sheet Metal Technology	13205	0.5
# Research and Design in Building Trades	17005	1
# Remodel and Building Maintenance	17009	0.5
# HVAC Technology	17056	0.5
# Plumbing Technology	17058	0.5
# Pipefitting Technology	17061	1
# Electrical and Security Systems	17113	0.5
# Carpentry II	38002	1
# Furniture and Cabinetry Fabrication	38007	1
#  Advanced Materials Technology	38010	1
Workplace Experience in Architecture and Construction	38100	0.5
Comprehensive Workplace Experience in Architecture and Construction	38110	1

Required course for construction strand.

Requires FACS Licensure.

# Has prerequisite(s). Courses comprising a sequence are numbered consecutively. See Competency Profile for details.

Advanced Materials Technology (38010) has prerequisite courses: Woodworking Principles (17007) **AND** Furniture and Cabinetry (38007).

ARTS, A/V AND COMMUNICATION CAREER CLUSTER PATHWAY

# Digital Media Pathway

CIP CODE 09.0702

## INTRODUCTORY LEVEL

Title	Code	Credit
Computer Applications	10004/60004	1
Business Essentials	12050	0.5

## TECHNICAL LEVEL

Title	Code	Credit
Graphic Design	05162/11154	1
Sports and Entertainment Marketing	12163	0.5
* 21 <sup>st</sup> Century Journalism	30100	0.5
Graphic Design Fundamentals	30102	0.5
Audio/Video Production Fund	30103	0.5
Digital Media Technology	30104	0.5
Photo Imaging	30105	0.5
Digital Marketing	35162	0.5
Media and Public Relations	43115	0.5

## APPLICATION LEVEL

Title	Code	Credit
Video Production	30150	1
Digital Media Design and Production	30151	1
Digital Media Project Management	31091	1

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.


\* Required course for pathway approval.

## ARTS, A/V AND COMMUNICATION CAREER CLUSTER PATHWAY

# Graphic Design Pathway

CIP CODE 50.0499

### INTRODUCTORY LEVEL

Title	Code	Credit
 Computer Applications	10004/60004	1
Introduction to Drawing and Design	30006	0.5

### TECHNICAL LEVEL

Title	Code	Credit
Graphic Design	05162/11154	1
Computer Graphics	10202	1
Principles of Illustration	30101	0.5
* Graphic Design Fundamentals	30102	0.5
Photo Imaging	30105	0.5

### APPLICATION LEVEL

Title	Code	Credit
Media Technology - Workplace Experience	10248	1
Graphic Design Project Management	31090	1

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

 Business Essentials 12050 may be integrated with Computer Applications 10004.

\* Required course for pathway approval.

BUSINESS MANAGEMENT AND ADMINISTRATION CAREER CLUSTER DESIGN

# Business Management and Entrepreneurship Pathway


CIP CODE 52.0799



**APPROVED PATHWAY:**

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

**INTRODUCTORY LEVEL**

Title	Code	Credit
*  Business Essentials	12050	0.5

**TECHNICAL LEVEL**

Title	Code	Credit
* Business Communications	12009	0.5
* Business Management	12052	0.5
* Entrepreneurship	12053	0.5

**OPTIONAL TECHNICAL LEVEL**

**SUPPORTIVE BUSINESS AND ENTREPRENEURSHIP**

Title	Code	Credit
Business Law	12054	0.5
IB Business and Management	12059	1
Accounting	12104	1
Business Economics	12105	0.5
Principles of Marketing	12164	1

**SUPPORTIVE ENTREPRENEURSHIP**

Title	Code	Credit
Web Page Design	10201	1
Computer Graphics	10202	1
CAM	13204	1
Culinary Essentials	16052	0.5
Carpentry	17002	1
Remodel and Building Maintenance	17009	0.5
AgriScience	18002	1
Ag Welding (and/or 39207)	18404	1
Foundations of Early Childhood	19052	1
Engineering Design and Development	21007	1
Drafting/CAD	21107	1
Digital Marketing	35162	0.5
Production Welding (and/or 18404)	39207	1
General Service I	40150	1
Auto Collision	40300	1

**APPLICATION LEVEL**

Title	Code	Credit
* Business Management and Entrepreneurship Workplace Experience	12098	0.5/1
Advanced Business Management and Entrepreneurship Workplace Experience	32998	1
* Applied Business Development	32200	1

 Business Essentials 12050 may be integrated with Computer Applications 10004.

\* Required course for pathway approval.

● Students may take up to **ONE CREDIT** of Supportive Entrepreneurship Technical courses to become a completer and/or concentrator in the Business Management and Entrepreneurship Pathway.

■ School may include both in pathway - student only takes **ONE** for completer status. Either 12098 or 32200 Required course for pathway approval.

The Consumer and Personal Finance course (22210) for .5 credit will not be available within Pathways due to the new Financial Literacy graduation requirement.

## EDUCATION AND TRAINING CAREER CLUSTER DESIGN

# Teaching/Training Pathway

CIP CODE 13.0101

### APPROVED PATHWAY:

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
Introduction to Family and Consumer Sciences	19251	1
Career and Life Planning	19258	0.5

### TECHNICAL LEVEL

Title	Code	Credit
* Teaching as a Career	19151	1
Educational Leadership and Training A	19154	0.5
Education Research and Innovation	19155	0.5
* Family Studies	19255	0.5
Teaching Observation	42251	0.5

Must choose at least **ONE** of these technical level courses for pathway approval.

Title	Code	Credit
* * Human Growth and Development - Early Years	45004	0.5
* * Lifespan Development	45014	0.5

### APPLICATION LEVEL

Title	Code	Credit
Teaching Internship	19152	1
Educational Leadership and Training B	19198	0.5

\* Required course for pathway approval.

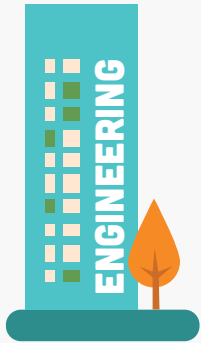
\* Alternate course Orientation to Early Childhood Development (19051) may be allowed with prior approval.



## ENGINEERING CAREER CLUSTER DESIGN

# Aviation Production Pathway

CIP CODE 15.0000



### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
Production Blueprint Reading	21108	0.5
Introduction to Industrial Technology	38001	0.5

### TECHNICAL LEVEL

Title	Code	Credit
* Hand and Power Tools	40400	0.5
* Aviation Fundamentals	40410	0.5
Aviation Systems	40420	1

#### DESIGN STRAND

Title	Code	Credit
Drafting/CAD	21107	1

#### PRODUCTION STRAND

Title	Code	Credit
Mass Production I	13052	1

### APPLICATION LEVEL

#### DESIGN STRAND

Title	Code	Credit
Workplace Experience	21048	1
Workplace Experience in Engineering	41048	0.5
# Part Design	41500	0.5
Assembly Design	41505	0.5
Wireframe and Surfaces	41510	0.5
Aerospace Drawings	41515	0.5
# Special Projects and Research in Aviation	41520	1

#### PRODUCTION STRAND

Title	Code	Credit
Tooling I	40600	1
# Tooling II	40610	1
Aerostructures I	40620	1
# Aerostructures II	40630	1
Composites I	40640	1
# Composites II	40650	1
Workplace Experience in Engineering	41048	0.5
Workplace Experience	21048	1

\* Required courses for pathway approval.

# Has prerequisite course(s):

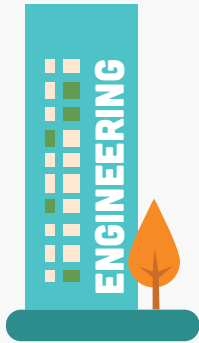
Courses comprising a sequence are numbered consecutively. See Competency Profile for details. Drafting/CAD (21107) is a prerequisite for Part Design (41500).

Part Design (41500), Assembly Design (41505), Wireframe and Surfaces (41510), and Aerospace Drawings (41515) are prerequisites for Special Projects and Research in Aviation (41520).

## ENGINEERING CAREER CLUSTER DESIGN

# Energy Pathway

CIP CODE 17.2071



### APPROVED PATHWAY:

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
* Introduction to Energy	41100	0.5
Introduction to Environmental Science	41207	0.5

### TECHNICAL LEVEL

Title	Code	Credit
* Energy Industry Fundamentals	41105	1
Principles of Applied Engineering	41320	1
Fundamentals of Electricity and Electronics	41170	1
AP Environmental Science	03207	1
Energy, Power and Society	41150	1
Wind Energy Operations	41160	1
Mechanical Power Transmission Systems	13302	0.5
Meteorology	03006	1

### APPLICATION LEVEL

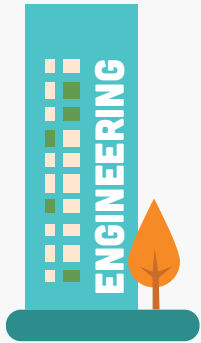
Title	Code	Credit
Research and Development for Energy	41250	0.5
Research and Development for Energy - Comprehensive	41260	1
Advanced Electricity and Electronics	41270	0.5
Materials Science in Engineering	41355	0.5
Hydraulics and Pneumatics	39302	0.5
HVAC Technology	17056	0.5

\* Required course for pathway approval.

## ENGINEERING CAREER CLUSTER DESIGN

# Engineering and Applied Mathematics Pathway

CIP CODE 14.0101



### APPROVED PATHWAY:

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
Chemistry	03101	1
Production Blueprint Reading	21108	0.5
* Introduction to Engineering	41310	1

### TECHNICAL LEVEL

Title	Code	Credit
● Engineering Design	21006	1
● Drafting/CAD	21107	1
Robotics	21009	1
Foundations of Electronics	21201	1
Principles of Applied Engineering	41320	1

### APPLICATION LEVEL

Title	Code	Credit
Engineering Design and Development	21007	1
Digital Electronics	21008	1
Computer Integrated Manufacturing	21010	1
Civil Engineering and Architecture	21012	1
Aerospace Engineering	21013	1
Particular Topics in Engineering	21015	1
Emerging Technologies	21053	1
Project Management	41350	0.5
Materials Science and Engineering	41355	0.5
Workplace Experience in Engineering	41048	0.5
Workplace Experience	21048	1

\* Required course for pathway approval.

● **MUST** offer either 21006 or 21107, but not both for pathway approval.

## FINANCE CAREER CLUSTER DESIGN

# Business Finance Pathway

CIP CODE 52.0801

### INTRODUCTORY LEVEL

Title	Code	Credit
* Business Essentials	12050	0.5

### TECHNICAL LEVEL

Title	Code	Credit
* Accounting	12104	1

### APPLICATION LEVEL

#### ● FINANCIAL INSTITUTIONS AND SERVICES STRAND

Title	Code	Credit
Banking and Finance	12101	0.5
Investing	12107	0.5
Risk Management and Insurance	12106	0.5

#### ● ACCOUNTING STRAND

Title	Code	Credit
Advanced Accounting	33108	1
College Accounting	33109	1

#### OPTIONAL SUPPORTIVE COURSES

Title	Code	Credit
Business Economics	12105	0.5
Business Communications	12009	0.5
Business Law	12054	0.5
Entrepreneurship	12053	0.5
Advanced Spreadsheet Applications	33110	0.5

#### OPTIONAL SUPPORTIVE COURSES

Title	Code	Credit
■ Finance - Workplace Experience	12148	0.5
■ Finance - Workplace Experience	12148	1
Advanced Finance - Workplace Experience	33200	1

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

\* Required courses for pathway approval.

● **ONE CREDIT** from at least one strand is required.

■ School may include both in pathway. Student only takes one for completer status.

The Consumer and Personal Finance course (22210) for .5 credit will not be available within Pathways due to the new Financial Literacy graduation requirement.

GOVERNMENT AND PUBLIC ADMINISTRATION CAREER CLUSTER DESIGN

# Government and Public Administration Pathway

CIP CODE 44.0401

## APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
* Introduction to Government and Public Administration	43001	0.5
Career and Life Planning	19258	0.5
U.S. History	04101	1
AP U.S. History	04104	1
American Government	04151	0.5
AP American Government	04159	0.5

### TECHNICAL LEVEL

Title	Code	Credit
* Government and Public Administration Fundamentals	43105	0.5
IT for Service Professions	44010	0.5
Lifespan Development	45014	0.5

### PUBLIC ADMINISTRATION STRAND

Title	Code	Credit
Business Management	12052	0.5
Business Law	12054	0.5
Accounting	12104	1
Business Economics	12105	0.5

### PRE-LAW LEGAL ASSISTANCE STRAND

Title	Code	Credit
Government and Public Media Relations	04990	0.5
Business Economics	12105	0.5
Business Law	12054	0.5
Practical Law	44300	0.5

### APPLICATION LEVEL

Title	Code	Credit
Foundations in Law	44305	1
Career Connections	19298	0.5
Governance Applications	43250	1
Legal Proceedings	44310	1

- \* Required course for pathway approval.
- Courses required for graduation and unfunded.
- Or AP equivalent.
- Required course in the strand.

## HEALTH AND BIO SCIENCES CAREER CLUSTER DESIGN

# Biochemistry Pathway

CIP CODE 14.1401

### INTRODUCTORY LEVEL

Title	Code	Credit
Environmental Science	03003	1
Chemistry	03101	1
Computing Systems (8-9)	10002/60002	1
Computer Applications (8-9)	10004/60004	1

### TECHNICAL LEVEL

Title	Code	Credit
Biotechnology in Agriculture	18308	1
* Anatomy and Physiology	03053	1
AP Environmental Science	03207	1
Pharmacology	14253	1
Applied Biochemistry	03203	1
Plant and Soil Science	18058	1

### APPLICATION LEVEL

Title	Code	Credit
Natural Resources Management	18504	1
● Bioengineering	21020	1
● Biotechnical Engineering	21014	1
Environmental Resources and Wildlife Science	37506	1
Emerging Technologies	21053	1
Biochemistry Workplace Experience	21048	1
Applications in Biotechnology in Agriculture	18320	1

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

\* Required course for pathway approval.

● Must choose **ONE** of these Application Level courses for pathway approval.

## HEALTH AND BIO SCIENCES CAREER CLUSTER DESIGN

# Biomedical Pathway

CIP CODE 14.0501

### INTRODUCTORY LEVEL

Title	Code	Credit
Biology	03051/03052	1
Chemistry	03101	1
Computing Systems (8-9)	10002/60002	1
Computer Applications (8-9)	10004/60004	1

### TECHNICAL LEVEL

Title	Code	Credit
Principles of Biomedical Science	14251	1
Medical Interventions	14105	1
* Human Body Systems	14102	1
* Anatomy and Physiology	03053	1
Robotics	21009	1
Pharmacology	14253	1
Food Science	19254	1
Agricultural Food Science	18305	1
AP Biology	03056	1

### APPLICATION LEVEL

Title	Code	Credit
Biomedical Innovation	14255	1
● Bioengineering	21020	1
● Biotechnical Engineering	21014	1
Emerging Technologies	21053	1
Particular Topics in Engineering	21015	1
Biomedical Workplace Experience	14998	1

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

- \* Must choose **ONE** of these Technical level courses for pathway approval.
- Must choose **ONE** of these Application Level courses for pathway approval.

## HEALTH AND BIO SCIENCES CAREER CLUSTER DESIGN

# Health Science Pathway

CIP CODE 51.9999

### INTRODUCTORY LEVEL

Title	Code	Credit
* Introduction to Health Care	14000	0.5
Biology	03051	1
Chemistry	03101	1

### TECHNICAL LEVEL

Title	Code	Credit
Nutrition and Wellness	19253	0.5
* Anatomy and Physiology	03053	1
EMS First Responder	44050	0.5
Medical Terminology	14154	0.5
Health Information (HIT)	14157	1
AP Biology	03056	1
Health Care Research and Clinical Skills A	14254	0.5
Health Care Research and Clinical Skills B	36254	1

#### GENERAL HEALTH STRAND (PA, MED)

Title	Code	Credit
Fundamentals of Emergency Services	14055	0.5
Medical Interventions	14105	1

#### SPORTS MED/REHABILITATION STRAND (ATC, PT, OT)

Title	Code	Credit
Physical Therapy	14060	1
Care of Athletes	14062	0.5
Sports Medicine I	14072	1

#### ALLIED HEALTH STRAND (Nursing, X-Ray, EMT, Lab Sciences)

Title	Code	Credit
Medical Imaging	14103	0.5
Pharmacology	14253	1
Emergency Medical Tech (EMT)	44060	1

### APPLICATION LEVEL

Title	Code	Credit
Certified Medication Aide	36156	0.5
Certified Nursing Assistant	14997	0.5/1
Heath Care Work Experience	36992	1
Heath Care Work Experience	36993	2

#### GENERAL HEALTH STRAND (PA, MED)

Title	Code	Credit
Phlebotomy Technician	14104	0.5

#### SPORTS MED/REHABILITATION STRAND (ATC, PT, OT)

Title	Code	Credit
Sports Medicine II	14073	1

#### ALLIED HEALTH STRAND (Nursing, X-Ray, EMT, Lab Sciences)

Title	Code	Credit
Phlebotomy Technician	14104	0.5
Home Health Aide	36053	0.5
Dental Assistant	36054	1
Pharmacy Technician	36157	1
# Emergency Medical Tech II (EMT II)	44065	1

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

\* Required course for pathway approval.

# Has a prerequisite Emergency Medical Tech (44060).

📄 Courses may require specialized teacher certification and/or offer professional certification.





## HOSPITALITY AND TOURISM CAREER CLUSTER DESIGN

# Restaurant and Event Management Pathway

CIP CODE 12.0504

### APPROVED PATHWAY:

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
Business Essentials	12050	0.5
Introduction to Family and Consumer Sciences	19251	1
Career and Life Planning	19258	0.5

### TECHNICAL LEVEL

Select a strand at division.

Title	Code	Credit
* Culinary Essentials	16052	0.5
Nutrition and Wellness	19253	0.5

#### EVENT PLANNING AND MANAGEMENT STRAND

Title	Code	Credit
Foundations of Travel and Tour	16151	0.5
📍 Event Planning and Management	34052	0.5

#### CULINARY ARTS AND MANAGEMENT STRAND

Title	Code	Credit
📍 Culinary Arts	16053	1
# Culinary Arts II	16055	0.5
Baking and Pastry I	16056	0.5
# Baking and Pastry II	16057	0.5
Food Science	19254	1
Event Planning and Management	34052	0.5

These courses may be offered after **THREE** credits in the Technical Level have been selected:

Title	Code	Credit
Entrepreneurship	12053	0.5
Principles of Marketing	12164	1

- \* Required course for pathway approval.
- # Has a prerequisite course(s):  
Courses comprising a sequence are numbered consecutively. See Competency Profile for details.  
Culinary Arts (16053) is a prerequisite for Culinary Arts II (16055).
- 📍 Required course in the strand.

### APPLICATION LEVEL

#### EVENT PLANNING AND MANAGEMENT STRAND

Title	Code	Credit
Community Connections	19297	0.5
Career Connections	19298	0.5
Applied Business Development	32200	1

#### CULINARY ARTS AND MANAGEMENT STRAND

Title	Code	Credit
Culinary Workplace Experience	16098	1
Community Connections	19297	0.5
Career Connections	19298	0.5

HOSPITALITY AND TOURISM CAREER CLUSTER DESIGN

# Travel and Tourism Pathway

CIP CODE 52.0901

## APPROVED PATHWAY:

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
Business Essentials	12050	0.5
Introduction to Family and Consumer Sciences	19251	1
Career and Life Planning	19258	0.5

### TECHNICAL LEVEL

Title	Code	Credit
Entrepreneurship	12053	0.5
Principles of Marketing	12164	1
Culinary Essentials	16052	0.5
● Foundations of Hospitality and Lodging	16101	0.5
● Foundations of Travel and Tourism	16151	0.5
Nutrition and Wellness	19253	0.5
* Event Planning and Management	34052	0.5

### APPLICATION LEVEL

Title	Code	Credit
Hospitality and Lodging Management	16148	1
# Community Connections	19297	0.5
# Career Connections	19298	0.5

- \* Required course for pathway approval.
- # Has a prerequisite of **ONE** credit within Human Services Pathway courses.
- Must choose at least **ONE** of these Technical Level courses for pathway approval.



## HUMAN SERVICES CAREER CLUSTER DESIGN

# Early Childhood Development and Service Pathway

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

CIP CODE 19.0709

### INTRODUCTORY LEVEL

Title	Code	Credit
Introduction to Family and Consumer Sciences	19251	1
Career and Life Planning	19258	0.5

### TECHNICAL LEVEL

Select a strand at the division.

Title	Code	Credit
Leadership Service in Action	19257	0.5

Must teach **ALL** courses in the strand of your choice.

#### STRAND 1

Title	Code	Credit
* Orientation to Early Childhood Development	19051	1
* Foundations to Early Childhood Development	19052	1

#### STRAND 2

Title	Code	Credit
* Foundations to Early Childhood Development	19052	1
* Family Studies	19255	0.5
* Human Growth and Development - Early Years	45004	0.5

### APPLICATION LEVEL

Title	Code	Credit
Early Childhood Applications	19098	1
# Community Connections	19297	0.5
# Career Connections	19298	0.5

\* Required course for pathway approval.

# Has a prerequisite of **ONE** credit within Human Services Pathway courses.



## HUMAN SERVICES CAREER CLUSTER DESIGN

# Family, Community and Consumer Services Pathway

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

CIP CODE 19.0799

### INTRODUCTORY LEVEL

Title	Code	Credit
Introduction to Family and Consumer Sciences	19251	1
Career and Life Planning	19258	0.5

### TECHNICAL LEVEL

Title	Code	Credit
Culinary Essentials	16052	0.5
Nutrition and Wellness	19253	0.5
* Family Studies	19255	0.5
Leadership Service in Action	19257	0.5
Relationships and Personal Development	19260	0.5
● Human Growth and Development - Early Years	45004	0.5
● Lifespan Development	45014	0.5

### APPLICATION LEVEL

Title	Code	Credit
# Community Connections	19297	0.5
# Career Connections	19298	0.5

- \* Required course for pathway approval.
- # Has a prerequisite of **ONE** credit within Human Services Pathway courses.
- Must choose at least **ONE** of these Technical Level courses for pathway approval.

The Consumer and Personal Finance course (22210) for .5 credit will not be available within Pathways due to the new Financial Literacy graduation requirement.



## HUMAN SERVICES CAREER CLUSTER DESIGN

# Fashion, Apparel, Interior Design (FAID) Pathway

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### CIP CODE 19.0999

#### INTRODUCTORY LEVEL

Title	Code	Credit
Introduction to Family and Consumer Sciences	19251	1
Career and Life Planning	19258	0.5
Drafting	21102	0.5
Introduction to Drawing	30005	0.5

#### TECHNICAL LEVEL

Select a strand at the division.

Title	Code	Credit
* Essentials of FAID	30110	0.5
FAID Merchandising and Entrepreneurship	30112	0.5

#### FASHION AND APPAREL DESIGN (STRAND A)

Title	Code	Credit
* Apparel Production I	19201	0.5
# Apparel Production II	19203	0.5
* Fashion Trends	30111	0.5

#### INTERIOR DESIGN (STRAND B)

Title	Code	Credit
* Interior Design I	19263	0.5
# Interior Design II	22212	0.5
Architecture Design	21103	1

#### APPLICATION LEVEL

#### STRANDS A AND B

Title	Code	Credit
Career Connections	19298	0.5
FAID Studio	30160	1

\* Required course for pathway approval per strand.

Only for Interior Design Strand.

# Has prerequisite course(s): Courses comprising a sequence are numbered consecutively. See Competency Profile for details.



INFORMATION TECHNOLOGY CAREER CLUSTER DESIGN

# Information Support and Services Pathway

CIP CODE 11.0301

## APPROVED PATHWAY:

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
Computing Systems	10002/60002	1
Computer Applications	10004/60004	1

### TECHNICAL LEVEL

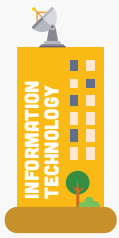
Title	Code	Credit
* Foundations of Information Technology	10001	1

### APPLICATION LEVEL

Title	Code	Credit
CyberSecurity I	10020	1
# CyberSecurity II	10900	1
# Information Support and Services I	10052	1
# Information Support and Services II	10097	1
Work-based Learning in Information Support and Services	10098	1

\* Required course for pathway approval.

# Has prerequisite course(s): Courses comprising a sequence are numbered consecutively. See Competency Profile for details.



## INFORMATION TECHNOLOGY CAREER CLUSTER DESIGN

# Network Systems Pathway

CIP CODE 11.0901

### APPROVED PATHWAY:

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
Computing Systems	10002/60002	1
Computer Applications	10004/60004	1

### TECHNICAL LEVEL

Title	Code	Credit
* Foundations of Information Technology	10001	1

### APPLICATION LEVEL

Title	Code	Credit
CyberSecurity I	10020	1
# CyberSecurity II	10900	1
# Network Systems II	10112	1
# Network Systems III	10147	1
Work-based Learning in Network Systems	10148	1

\* Required course for pathway approval.

# Has prerequisite course(s): Courses comprising a sequence are numbered consecutively. See Competency Profile for details.



## INFORMATION TECHNOLOGY CAREER CLUSTER DESIGN

# Programming and Software Development Pathway

CIP CODE 11.0201

### APPROVED PATHWAY:

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
Computing Systems	10002/60002	1
Computer Applications	10004/60004	1
Introduction to Computer Coding	31001	0.5
Introduction to Physical Computing	31002	0.5

### TECHNICAL LEVEL

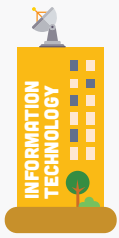
Title	Code	Credit
Technical Introduction to Computer Science	41010	1
Computer Programming	10152	1
Database Applications	10053	1
Web Page Design	10201	1
Data System/Processing	10054	1
Computer Programming Other Language	10156	1
AP Computer Science Principles	31094	1

### APPLICATION LEVEL

Title	Code	Credit
CyberSecurity I	10020	1
# CyberSecurity II	10900	1
AP Computer Science A	10157	1
IB Computing	10159	1
Particular Topics in Computer Programming	10160	1
Work-based Learning in Programming and Software Development	10198	1

# Has prerequisite course(s): Courses comprising a sequence are numbered consecutively. See Competency Profile for details.





## INFORMATION TECHNOLOGY CAREER CLUSTER DESIGN

# Web and Digital Communications Pathway

CIP CODE 11.1004

### APPROVED PATHWAY:

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
4. Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
Computing Systems	10002/60002	1
Computer Applications	10004/60004	1

### TECHNICAL LEVEL

Title	Code	Credit
Graphic Design	05162/11154	1
Computer Programming	10152	1
Web Page Design	10201	1
Computer Graphics	10202	1
Interactive Media	10203	1
Animation	10210	1
Internet Marketing	12162	1
GIS Technology	21058	1

### APPLICATION LEVEL

Title	Code	Credit
IB Information Technology in Global Society	10007	1
Emerging Technologies - Computing	10040	1
Game Design and Authoring for the Web	10165	1
Particular Topics in Media Technology	10204	1
GIS Spatial Applications	21112	1
Web and Digital Communications Project Management	31096	1



## LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY CAREER CLUSTER DESIGN

# Emergency and Fire Management Services Pathway

CIP CODE 43.0299

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
* Introduction to Law, Public Safety, Corrections and Security (LPSCS)	44001	0.5
Introduction to Emergency Medical Services (EMS)	44005	0.5

### TECHNICAL LEVEL

Title	Code	Credit
Medical Terminology	14154	0.5
Public Safety Physical Education	44020	1
EMS First Responder	44050	0.5
Hazardous Materials for the First Responder	44070	0.5
Fire Service Special Operations	44080	0.5

### APPLICATION LEVEL

Title	Code	Credit
EMT I	44060	1
# EMT II	44065	1
Fire Science I	44100	1
# Fire Science II	44101	1
Work Experience in LPSCS	44298	0.5

\* Required course for pathway approval.

# Has prerequisite course(s): Courses comprising a sequence are numbered consecutively. See Competency Profile for details.

Courses may require specialized teacher certification and/or offer professional certification.

Prerequisite courses: EMT I (44060) and EMT II (44065) **OR** Fire Science I (44100) and Fire Science II (44101).



# Corrections, Security, Law and Law Enforcement Services Pathway

CIP CODE 43.0199

## APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

## INTRODUCTORY LEVEL

Title	Code	Credit
* Introduction to Law, Public Safety, Corrections and Security (LPSCS)	44001	0.5

## TECHNICAL LEVEL

### PRE-LAW STRAND

Title	Code	Credit
* Practical Law	44300	0.5
* Business Law	12054	0.5
Business Communications	12009	0.5
Business Management	12052	0.5
Accounting	12104	1
Business Economics	12105	0.5

### LAW ENFORCEMENT STRAND

Title	Code	Credit
Public Safety Physical Education	44020	1
EMS First Responder	44050	0.5
Hazardous Materials for the First Responder	44070	0.5
Law Enforcement I	44200	1
Forensic Science I	44225	1

## APPLICATION LEVEL

### PRE-LAW STRAND

Title	Code	Credit
Foundations in Law	44305	1
Legal Proceedings	44310	1
Work Experience in LPSCS	44298	0.5

### LAW ENFORCEMENT STRAND

Title	Code	Credit
# Law Enforcement II	44201	1
Certified Protection Officer	44210	0.5
Corrections Officer	44215	0.5
# Forensic Science II	44226	1
Work Experience in LPSCS	44298	0.5

\* Required course for pathway and/or strand approval.

# Has prerequisite course(s): Courses comprising a sequence are numbered consecutively. See Competency Profile for details.

Prerequisite courses: Business Law, Practical Law, **AND** Foundations in Law **OR** Legal Proceedings; **OR** Business Law, Accounting, **AND** Foundations in Law

Prerequisite courses: Law Enforcement I and II; **OR** Law Enforcement I **AND** Certified Protection Officer **OR** Corrections Officer; **OR** Forensic Science I **AND** II.

Courses may require specialized teacher certification and/or offer professional certification.

## MANUFACTURING CAREER CLUSTER DESIGN


# Manufacturing Pathway

CIP CODE 48.0000



### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.





### INTRODUCTORY LEVEL

Title	Code	Credit
 Introduction to Welding	13207	0.5
Production Blueprint Reading	21108	0.5
Introduction to Industrial Technology	38001	0.5

### TECHNICAL LEVEL

Title	Code	Credit
 Agricultural Welding	18404	1
Robotics	21009	1
 Welding Processes I	39207	1
Hand and Power Tools	40400	0.5

### APPLICATION LEVEL

Title	Code	Credit
 Welding Processes II	39208	1
 Agricultural Welding II	18407	1
 Work Experience in Manufacturing	13348	0.5
 Work Experience in Manufacturing - Comprehensive	13998	1

### PRODUCTION STRAND

Title	Code	Credit
Production Methods I	13052	1
Machine Tool Technology	13203	1
Computer-Aided Machining (CAM) I	13204	1
Drafting/CAD	21107	1
# Production Print Reading II	39108	0.5

### PRODUCTION STRAND

Title	Code	Credit
# Advanced Drafting/CAD	21150	1
# Advanced Materials Technology	38010	1
# Automated Integrated Systems	39010	0.5
# Production Methods II	39052	1
# Computer-Aid Machining (CAM) II	39205	0.5

### MAINTENANCE STRAND

Title	Code	Credit
Mechanical Power Transmission Systems	13302	0.5
Foundations of Electronics	21201	1


### MAINTENANCE STRAND

Title	Code	Credit
Sheet Metal Technology	13205	0.5
Remodeling and Building Maintenance	17009	0.5
HVAC Technology	17056	0.5
Plumbing Technology	17058	0.5
Electrical and Security Systems	17113	0.5
Digital Electronics	21008	1
# Hydraulics and Pneumatics	39302	0.5

 Production strand only.

# Has prerequisite course(s): Courses comprising a sequence are numbered consecutively. See Competency Profile for details.

 Must take at least **ONE** credit of Technical Level course and Application Level course combined.

 May offer either Agricultural Welding I (18404) and Agricultural Welding II (18407) **OR** Welding Processes I (39207) and Welding Processes II (39208), but not both pairs of sequential courses.

## MARKETING CAREER CLUSTER DESIGN


# Marketing Pathway

CIP CODE 52.1402

### APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

### INTRODUCTORY LEVEL

Title	Code	Credit
*  Business Essentials	12050	0.5

### TECHNICAL LEVEL

Title	Code	Credit
 Business Communications	12009	0.5
*  Principles of Marketing	12164	1

### APPLICATION LEVEL




Title	Code	Credit
*  Marketing Applications	35300	1

### OPTIONAL SUPPORTIVE COURSES

Title	Code	Credit
Graphic Design	05162/11154	1
Web Page Design	10201	1
Computer Graphics	10202	1
Business Management	12052	0.5
Entrepreneurship	12053	0.5
IB Business and Management	12059	1
Accounting	12104	1
Business Economics	12105	0.5
Sports/Entertainment Marketing	12163	0.5
Principles of Advertising	12165	0.5
Advanced Spreadsheet Applications	33110	0.5
Digital Marketing	35162	0.5

### OPTIONAL SUPPORTIVE COURSES

Title	Code	Credit
Marketing Management	12166	1
Integrated Marketing Applications	12195	0.5
Marketing Research	12196	1
 Marketing - Workplace Experience	12198	0.5
 Marketing - Workplace Experience	12198	1
Advanced Marketing Workplace Experience	12199	1
Marketing Communications	35168	0.5

- \* Required course(s) for pathway approval and used for assessing mastery of knowledge of marketing completers.
-  Course is not required for pathway approval, but strongly recommended by external review committee and Kansas Advisory Committee for Career and Technical Education (KACCTE).
-  School may include both in pathway. Student only takes **ONE** for completer status.
-  Marketing Completer Assessment aligns directly with MBA Research Two - Credit Standard Marketing Program of Study Exam.



## TRANSPORTATION CAREER CLUSTER DESIGN

## Aviation Maintenance Pathway

CIP CODE 47.0608

## APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

## INTRODUCTORY LEVEL

Title	Code	Credit
Production Blueprint Reading	21108	0.5
Introduction to Industrial Technology	38001	0.5

## TECHNICAL LEVEL

Title	Code	Credit
* Hand and Power Tools	40400	0.5
* Aviation Fundamentals	40410	0.5
Aviation Systems	40420	1

## AVIONICS STRAND

Title	Code	Credit
Foundations of Electronics	21201	1

## AIRFRAME STRAND

Title	Code	Credit
Production Methods I	13052	1
Mechanical Power Transmission Systems	13302	0.5

## APPLICATION LEVEL

Title	Code	Credit
# Unmanned Aircraft Systems (UAS)	40490	1
■ Work Experience in Aviation	40700	0.5
■ Work Experience in Aviation - Comprehensive	40701	1

## AVIONICS STRAND

Title	Code	Credit
Digital Electronics	21008	1
AC Electronics	40450	1
DC Electronics	40460	1

## AIRFRAME STRAND

Title	Code	Credit
# Hydraulics and Pneumatics	39302	0.5
# Flight Training	40540	1

\* Required course for pathway approval.

# Has prerequisite course(s): See Competency Profile for details.

■ Must take at least **ONE** credit of Technical Level course and Application Level course combined.

## TRANSPORTATION CAREER CLUSTER DESIGN

# Mobile Equipment Maintenance Pathway

CIP CODE 47.9999

## APPROVED PATHWAY:

- Includes a minimum of three secondary-level credits.
- Includes a work-based element.
- Consist of a sequence:
  - Introductory-level course.
  - Technical-level course.
  - Application-level course.
- Supporting documentation includes:
  - Articulation Agreement(s).
  - Certification.
  - Program Improvement Plan.
  - Program of Study.
- Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.

## INTRODUCTORY LEVEL

Title	Code	Credit
Business Essentials	12050	0.5
● Introduction to Industrial Technology	38001	0.5
Automotive Information	40050	0.5
● Introduction to Transportation	40100	0.5

## TECHNICAL LEVEL

### TECHNOLOGY STRAND

Title	Code	Credit
○ Entrepreneurship	12053	0.5
Alternative Power	40210	0.5
Small Engine and Powertrains I	40212	0.5
Engine Mechanical Repair	40216	0.5
Diesel Engine Technology	40218	0.5

### TECHNOLOGY STRAND I

Title	Code	Credit
General Service I	40150	1

### TECHNOLOGY STRAND II

Title	Code	Credit
Electronic and Electrical Systems I	40200	1
Brakes I	40204	0.5
Drive Train Technology	40208	0.5
Engine Performance I	40220	0.5
Steering and Suspension I	40224	0.5
Mobile HVAC	40228	0.5

### COLLISION STRAND

Title	Code	Credit
○ Entrepreneurship	12053	0.5
Auto Collision I	40300	1
Auto Refinishing I	40310	1

## APPLICATION LEVEL

### TECHNOLOGY STRAND

Title	Code	Credit
# Small Engines and Powertrains II	40214	0.5
■ ✘ Work Experience in Transportation	40250	0.5
■ ✘ Work Experience in Transportation - Comprehensive	40251	1

### TECHNOLOGY STRAND I

Title	Code	Credit
# General Service II	40152	1
# General Service III	40154	1

### TECHNOLOGY STRAND II

Title	Code	Credit
# Electronics and Electrical Systems II	40202	1
# Brakes II	40206	0.5
# Engine Performance II	40222	1
# Steering and Suspension II	40226	0.5

### COLLISION STRAND

Title	Code	Credit
■ ✘ Work Experience in Transportation	40250	0.5
■ ✘ Work Experience in Transportation - Comprehensive	40251	1
# Auto Collision II	40302	1
# Auto Refinishing II	40312	1

- Must choose **ONE** of these Introductory Level courses for pathway approval.
- # Has specific prerequisite course(s): Courses comprising a sequence are numbered consecutively. See Competency Profile for details.
- Will **NOT COUNT** as one of the three required secondary level credits for pathway approval. Will count as a funded course.
- Must take at least **ONE** credit of Technical Level course and Application Level course combined.
- ✘ Must choose **ONE** of these courses for Technology Strand.
- ✘ Must choose **ONE** of these courses for the Collision Strand.





# Kansas Career and Technical Education Terminology

As we design and implement the Career Clusters/Pathways Program of Study into the Kansas educational system, it is imperative to have some common terms and definitions that are used consistently throughout the state. To that end, we provide the following terms and definitions as a resource.

**APPLICATION LEVEL COURSE:** An advanced level course that builds on the technical level course and includes opportunities for the learner to demonstrate knowledge learned through practical application of skills. It should include work-based learning experiences such as an internship, health science clinical, SAE, work simulation or school-based endeavor (store, etc.).

**ARTICULATION:** A systematic, seamless student transition process from secondary to postsecondary education that maximizes use of resources and minimizes duplication.

**ARTICULATION AGREEMENT:** A written commitment that is agreed upon at the state level or approved annually by the lead administrators of a secondary institution and a postsecondary institution, or a sub-baccalaureate degree granting postsecondary institution and a baccalaureate

degree granting institution; to a program that is designed to provide students with a nonduplicative sequence of progressive achievement leading to technical skill proficiency, a credential, a certificate or a degree and is linked through credit transfer agreements between the two institutions {[20 U.S. Code § 2302 Section 3, Definition 4] Perkins Act of 2006: The Official Guide}. For Kansas use: the Articulation Agreement does not have to include a Credit transfer agreement (Advanced Placement Credit). It must include a seamless progression from one level to the next and may include such incentives as scholarships.

**CAREER AND TECHNICAL EDUCATION (CTE):** Organized educational activities that offer a sequence of courses that provide individuals with 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. The academic skills shall be, at the secondary level, aligned with the challenging state academic standards adopted by the Elementary and Secondary Education Act (ESEA). It provides technical skill proficiency leading to an industry-recognized credential, a certificate, or an associate degree and may include prerequisite courses (other than a remedial course) that meet the other requirements; and include competency-based, work-based or other applied learning that supports

the development of academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual [Section 3 (5) Carl D. Perkins Career and Technical Education Act of 2006 [Public Law 88–210; Dec. 18, 1963] [As Amended Through Strengthening Career and Technical Education for the 21st Century Act, P.L. 116–6, Enacted Feb. 15, 2019]].

**CAREER AND TECHNICAL EDUCATION (CTE) COURSE:** A CTE course (for an approved cluster/pathway) is one in a progression leading from introductory to technical to application levels that support state and national standards and competencies. The foundation for CTE courses is the inclusion of knowledge and skills that all students should achieve for a given career. Each course is required to provide enhanced and improved instruction through the integration of rigorous academics, career success skills, career development skills and student leadership. Courses may include experience-based learning opportunities. Courses, if applicable, can be articulated with a postsecondary institution for advanced placement credit. A course can be a part of a sequence of courses that creates an overall program of study assisting the student in preparing an individual plan of study.

**CAREER AND TECHNICAL EDUCATION (CTE)**

**SEQUENCE OF COURSES:** Those courses that include the career cluster pathway knowledge and skills as recognized by the Career Clusters. These courses provide learners with rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions, provides technical skill proficiency, an industry-recognized credential, a certificate, or a postsecondary degree, may include prerequisite courses (other than remedial courses) that meet other requirements. Career and Technical education courses may begin at eighth grade and do not include career exploration courses. Academic courses are counted only if they reflect industry skill standards.

**CAREER AND TECHNICAL STUDENT**

**ORGANIZATIONS (CTSOS):** Student-led organizations which are aligned and integrated into CTE programs at the middle, secondary and/or postsecondary institutions. Members develop and demonstrate leadership, personal growth, civic engagement, technical skills and 21<sup>st</sup> century skills in authentic, real-world applications.

**CAREER CLUSTER(S):** Divisions of the seven Kansas fields that include occupations organized around knowledge and skills that have common characteristics and job duties. Kansas identifies 16 broad clusters:

1. Agriculture, Food and Natural Resources;
2. Architecture and Construction;
3. Arts, A/V Technology and Communications;
4. Business, Management and Administration;
5. Education and Training;
6. Engineering;
7. Finance;
8. Government and Public Administration;

9. Health and Bio Science;
10. Hospitality and Tourism;
11. Human Services;
12. Information Technology;
13. Law, Public Safety and Security;
14. Manufacturing;
15. Marketing; and
16. Transportation.

**CAREER SUCCESS SKILLS:** Foundational skills that are essential for success in all careers; including applied knowledge (academic and critical thinking skills), effective relationships (interpersonal skills and personal qualities), and workplace skills (resource management, information and communication, systems thinking and technology). Kansas CTE has identified the US Department of Education's Employability Skills Framework as a model of career success skills.

**COMPLETER:** A student who has completed a minimum of three (3) secondary level credits in a single CTE pathway, with at least two (2) of those credits being a combination of technical and application-level courses.

A Completer must also earn or complete at least one or more of the following:

- Earn an end of pathway assessment/certification for completer status (industry-recognized certification or a passing score on a third-party, end-of-pathway assessment)
- Earn an Excel in CTE Qualifying Recognized Credential aligned to the Pathway
- Earn nine (9) + college hours leading to completion of a certificate or post-secondary program aligned to the Pathway's Program of Study
- Complete a high-quality work-based learning

career preparation experience, Kansas Work-Based Learning Continuum, in the Pathway defined in [Kansas Work-Based Learning: Personalized Learning Plan Guidance Document \(ksde.org\)](https://www.ksde.org/Portals/0/CSAS/CSAS%20Home/CTE%20Home/Kansas%20Work-Based%20Learning_Personalized%20Learning%20Plan%20(updated%202-2021).pdf?ver=2022-06-22-143054-737)<sup>1</sup>

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

**CROSSWALK (COMMON ) COURSE:** A course that is approved for inclusion in more than one Career Cluster pathway.

**COURSE COMPETENCY:** Statement that describes a unit of instruction (or duty area) related to course outcomes. A competency statement contains an active verb (that is observable and measurable) and a noun (instructional area). Specified competencies are identified and validated by business and industry and supported by the local advisory committee.

**CTE SCHOLAR:** See Kansas CTE Scholar

**CIVIC ENGAGEMENT:** The sharing of personal skills and knowledge through actions intended to improve communities, states, nations, the world and themselves.

**HIGH-DEMAND OCCUPATION:** An occupation that:

1. Has a critical shortage of workers to fill the employment demands of industry, and
2. Requires formal training exceeding that which can be provided on the job.

1 [https://www.ksde.org/Portals/0/CSAS/CSAS%20Home/CTE%20Home/Kansas%20Work-Based%20Learning\\_Personalized%20Learning%20Plan%20\(updated%202-2021\).pdf?ver=2022-06-22-143054-737](https://www.ksde.org/Portals/0/CSAS/CSAS%20Home/CTE%20Home/Kansas%20Work-Based%20Learning_Personalized%20Learning%20Plan%20(updated%202-2021).pdf?ver=2022-06-22-143054-737)

**HIGH-SKILL OCCUPATION:** An occupation that requires all of the following:

1. Specialized technical training,
2. An advanced level of skill sets as defined by each industry and/or education (examples: independent decision-making, critical thinking, problem-solving),
3. A recognized validation of skill attainment or credential (examples: certification, registration, licensure), and
4. Included mandatory continuing education and/or training.

**HIGH-WAGE OCCUPATION:** Kansas Department of Labor, Labor Market Information Services (LMIS), has created labor market information (LMI) organized by Cluster and Pathway. The LMI includes high-wage information.

**INDIVIDUAL PLAN OF STUDY:** An individual plan developed by a student (with guidance) to help guide them through the education process. It includes interest assessments to help students identify career preferences, assists with course selections based on career interests, looks at their postsecondary options, and has a portable electronic portfolio.

**INTERNSHIP:** A supervised work-based experience that links a learner with an employer for a planned set of activities designed to give the learner a broad overview of a business or occupational field (can be for a short or long term period/paid or unpaid).

**INTRODUCTORY LEVEL COURSE:** An introduction to a specific or multiple clusters or pathways that require similar foundation knowledge and skills. Taken prior to the technical and application level courses.

**KANSAS CAREER FIELD(S):** Occupations that are organized around broad, common knowledge and skills. They are recognized as Media and Technology; Business; Agriculture; Design,

Production, and Repair; Health; Public Services; and Family and Consumer Sciences.

**KANSAS CAREER PATHWAY(S):** Organized groupings of rigorous academic and career related courses leading from education to employment, that identify each step, skill, educational requirement and aptitude needed to be successful within any specific career. Currently there are 37 state-approved pathways identified within the 16 clusters.

**KANSAS COMMON COURSE CODE:** An alpha-numeric code used as a standard course description for secondary education that is intended to help schools and education agencies maintain longitudinal information about students' coursework in an efficient, standardized format that is consistent from one system to the next.

**KANSAS CTE SCHOLAR:** An outstanding career and technical education student in their senior year who has met criterion to indicate their well-rounded development.

**PARTICIPANT:** A student who has earned one (1), but less than two (2) secondary level credits in a single career and technical education (CTE) pathway.

**PROFESSIONAL LEARNING EXPERIENCE (WORK-BASED EXPERIENCE):** Experience based on a learner's career interest that partners the learner with the school, community and/or business/industry. It provides career or work opportunities above and beyond the classroom; may provide instruction in all aspects of the industry. These experiences are most commonly in application level courses.

**PROFICIENCY CREDIT:** Full or partial academic and/or CTE credit awarded to a student who has successfully demonstrated they have simultaneously met standards and expectations in more than one high school course through

integrated academic and/or CTE courses.

**PROGRAM(S) OF STUDY (POS):** Plan that incorporates secondary education and postsecondary education elements; includes academic and career and technical content in a coordinated, non-duplicative progression of courses; and leads to an industry-recognized credential or certificate at the postsecondary level, or an associate or bachelor's degree. The Program of Study is a requirement for Pathway approval.

**TECHNICAL LEVEL COURSE:** A course that builds on the knowledge and skills learned in the introductory level course, with a focus on acquiring practical technical skills specific to the cluster/pathway.

**21<sup>ST</sup> CENTURY SKILLS:** Skills that are essential for workplace/career success; including: critical thinking/problem-solving skills, communication skills, creativity and innovation skills, collaboration skills, information and media literacy skills, and contextual learning skills. They are integrated into what is known as 21<sup>st</sup> Century Content: global awareness, financial, economic, business and entrepreneurial literacy, civic literacy, health and wellness awareness, and environmental literacy.

**UNIT OF CREDIT:** A measure of credit that may be awarded to a student for satisfactory completion of a particular course or subject. A full unit of credit is that which generally requires 120 clock hours to complete. Credit may be awarded in increments based upon the amount of time a course or subject is offered and generally requires to complete. Individual students may be awarded credit based upon demonstrated knowledge of the content of a course or subject, regardless of the amount of time spent by the student in the course or subject. (Article 6, Section 2(a) of the Kansas Constitution.)

# Advisory Committee Information

An Advisory Committee is a group of persons outside the education profession, comprised of representative laypeople, recognized and respected in their own fields of work who advise CTE educators, administrators, and local board of education members regarding clusters/pathways, based on the employment needs of the community, state, regional, national, and international marketplace.

**ADVISORY COMMITTEE DESIGN:** Each CTE cluster or pathway must establish its own industry-unique Advisory Committee. The committee can serve multiple pathways within a cluster, but the committee as a whole cannot serve multiple clusters. An individual may serve on more than one cluster advisory committee; if appropriate (i.e. a welder could serve on both the Agriculture and Manufacturing Cluster Advisory Committees).

**GOALS , OBJECTIVES AND ACTIVITIES:** The Advisory Committee members evaluate the Career and Technical Education (CTE) cluster/pathway they are serving and advise the CTE coordinator and local administration on improvement of the cluster/pathway. Suggestions for an advisory committee's input include:

- Analyze the course content.
- Assist with selecting appropriate industry credentials/certifications.
- Evaluate facilities, program equipment, teacher resources, and textbooks.
- Assist with the instructional and learning experience.
- Assist with internship and job opportunities
- Form partnerships.
- Advise on Short- and Long-range planning.
- Provide recommendations for pathway improvement.

**ORGANIZATION OF AN ADVISORY COMMITTEE:**

Considerable attention should be given to the careful selection of members of the local Advisory Committee. The membership of a Career Cluster/Pathway Advisory Committee must include a minimum of three (3) representatives from business/industry with the optional addition of a postsecondary representative and a current student from its respective cluster/pathway. Business/ Industry members need to make their living in areas related to the pathway.

- Membership of a Cluster level Advisory Committee would include a minimum of three representatives from business/industry for each pathway within the cluster.
- Ex-Officio (non-voting) members of the committee include district staff and administration representatives. District staff members are strongly encouraged to attend and participate in Advisory Committee meetings, even though they are non-voting members.

**ADVISORY MEETINGS:** Meetings are conducted a minimum of twice each school year with a focus on evaluating the current pathway(s). Annual discussion should include an evaluation of why the program exists.

**PATHWAY IMPROVEMENT PLAN:** A written Pathway Improvement Plan is required for each approved pathway and is to be kept on file locally and updated annually. A plan that shows growth across a three-year period is required and should be written in S.M.A.R.T. Goal format. Topics should include goals for:

- Teacher Professional Development
- Physical Environment (Updating equipment and facilities)
- Instructional Strategies (Updating teacher resources, course additions, deletions, etc.)
- Partnerships (With parents, community, business/industry, and postsecondary institutions)
- Other

The Plan should be developed and approved by the Advisory Committee members and should be presented to the local Board of Education annually.

**REGIONAL ADVISORY COMMITTEES:** A Regional Advisory Committee is one that represents multiple schools/districts that have the same state approved pathway. Some guidelines for Regional Advisory Committees are as follows:

- Include business members that represent all communities included on the committee
- Include postsecondary members that represent all programs covered within the pathway
- Each meeting needs to speak to each school's specific pathway successes, concerns, improvements, etc.
- Need to develop Improvement Plans for each specific school represented
- Each school needs meeting minutes specific to their school that are kept on file locally.

For More Information on Advisory Committees: please consult the complete [Advisory Committee Handbook, 2020](#)<sup>1</sup>.

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<sup>1</sup> [https://www.ksde.org/Portals/0/CSAS/CSAS%20Home/CTE%20Home/Business\\_Industry/2020%20Advisory%20Committee%20Guidance%20Handbook.pdf?ver=2020-09-15-104407-093](https://www.ksde.org/Portals/0/CSAS/CSAS%20Home/CTE%20Home/Business_Industry/2020%20Advisory%20Committee%20Guidance%20Handbook.pdf?ver=2020-09-15-104407-093)

# Pathway Crossover Course Information

Several of our Pathway courses are utilized in more than one Pathway. The following pages contain a chart that shows which courses are in multiple Pathways.

**The Consumer and Personal Finance course (22210) for .5 credit will not be available within Pathways due to the new Financial Literacy graduation requirement.**

# Alphabetical Course Name Order

Course Title	Course #	Agribusiness Systems 01.0101	Comp. Agriculture Science 01.9999	Animal Science 01.0901	Biotechnology in Agriculture 23.1201	Food Prod. and Proc. Systems 01.0401	Natural Res. and Env. Systems 03.0101	Plant Systems 01.1101	Power, Structural and Tech. Systems 01.0201	Aviation Production 15.0000	Aviation Maintenance 47.0000	Construction and Design 46.0000	Energy 17.2071	Engineering and Appl. Math 14.0101	Manufacturing 48.0000	Mobile Equipment Maintenance 47.9999	Digital Media 09.0702	Info. Support and Services 11.0301	Network Systems 11.0901	Programming and Software Dev. 11.0201	Graphic Design 50.0499	Web and Digital Communications 11.1004	Business Mgmt and Entrepreneurship 52.0799	Business Finance 52.0801	Marketing 52.1402	Restaurant and Event Management 12.0504	Travel and Tourism 52.0901	Early Childhood Develop. 19.0709	Family, Consumer and Community Srv. 19.0799	F.A.I.D. 19.0999	Corrections, Security, Law and Law Enforcement 43.0199	Emergency and Fire Mgmt 43.0299	Government and Public Admin. 44.0401	Teaching/Training 13.0101	Biochemistry/Green/Hazmat 14.1401	Biomedical 14.0501	Health Science 51.9999						
21 <sup>st</sup> Century Journalism	30100															X																											
AC Electronics	40450									X																																	
Accounting	12104																					X	X	X								X		X									
Advanced Accounting	33108																						X																				
Advanced Agricultural Mechanics	18402							X																																			
Advanced Agricultural Power	18411							X																																			
Advanced Animal Science	18103			X																																							
Advanced Business Management and Entrepreneurship Workplace Experience	32998																					X																					
Advanced Drafting/CAD	21150														X																												
Advanced Electricity and Electronics	41270										X																																
Advanced Finance - Workplace Experience	33200																						X																				
Advanced Food Science	18317				X																																						
Advanced Internship	18049	X	X	X	X	X	X	X																																			
Advanced Marketing - Workplace Experience	12199																								X																		
Advanced Materials Technology	38010									X				X																													
Advanced Plant and Animal Science	18302	X																																									
Advanced Spreadsheet Applications	33110																					X	X																				
Advanced Studies	38050									X																																	
Aerospace Drawings	41515								X																																		
Aerospace Engineering	21013												X																														
Aerostructures I	40620								X																																		

Course Title	Course #	Agribusiness Systems 01.0101	Comp. Agriculture Science 01.9999	Animal Science 01.0901	Biotechnology in Agriculture 23.1201	Food Prod. and Proc. Systems 01.0401	Natural Res. and Env. Systems 03.0101	Plant Systems 01.1101	Power, Structural and Tech. Systems 01.0201	Aviation Production 15.0000	Aviation Maintenance 47.0000	Construction and Design 46.0000	Energy 17.2071	Engineering and Appl. Math 14.0101	Manufacturing 48.0000	Mobile Equipment Maintenance 47.9999	Digital Media 09.0702	Info. Support and Services 11.0301	Network Systems 11.0901	Programming and Software Dev. 11.0201	Graphic Design 50.0499	Web and Digital Communications 11.1004	Business Mgmt and Entrepreneurship 52.0799	Business Finance 52.0801	Marketing 52.1402	Restaurant and Event Management 12.0504	Travel and Tourism 52.0901	Early Childhood Develop. 19.0709	Family, Consumer and Community Srv. 19.0799	F.A.I.D. 19.0999	Corrections, Security, Law and Law Enforcement 43.0199	Emergency and Fire Mgmt 43.0299	Government and Public Admin. 44.0401	Teaching/Training 13.0101	Biochemistry/Green/Hazmat 14.1401	Biomedical 14.0501	Health Science 51.9999								
Aerostructures II	40630								X																																				
Agribusiness	18201	X	X	X	X	X	X	X	X																																				
Agricultural Fabrication	18409								X																																				
Agricultural Food Science	18305		X		X	X																																							
Agricultural Leadership and Communications	18203	X	X	X	X	X	X	X	X																																				
Agricultural Mechanics	18401								X																																				
Agricultural Structures	18403								X																																				
Agricultural Welding I	18404								X					X									X																						
Agricultural Welding II	18407								X					X									X																						
Agriculture Entrepreneurship	18202	X	X	X	X	X	X	X	X																																				
Agriscience	18002	X	X	X	X	X	X	X	X														X																						
Alternative Power	40210														X																														
American Government (unfunded)	04151																																												
Anatomy and Physiology	03053																																												
Animal Health/Vet Tech	18105			X																																									
Animal Science	18101		X	X	X	X																																							
Animation	10210																					X																							
AP American Government (unfunded)	04159																																												
AP Biology	03056																																												
AP Computer Science Applications	10157																			X																									
AP Computer Science Principles	31094																			X																									
AP Environmental Science	03207												X																																
AP US History (unfunded)	04104																																												



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Apparel Production I	19201																																														
Apparel Production II	19203																																														
Applications in Agribusiness	18220	X																																													
Applications in Biotechnology in Agriculture	18320			X																																											
Applications in Horticulture	18071						X																																								
Applied Biochemistry	03203																																														
Applied Business Development	32200																						X		X																						
Architecture Design	21103										X																																				
Assembly Design	41505								X																																						
Audio/Video Production Fundamentals	30103															X																															
Auto Collision I	40300														X								X																								
Auto Collision II	40302														X																																
Auto Refinishing I	40310														X																																
Auto Refinishing II	40312														X																																
Automated Integrated Systems	39010																																														
Automotive Information	40050														X																																
Aviation Fundamentals	40410								X	X																																					
Aviation Systems	40420								X	X																																					
Baking and Pastry I (prerequisite for 16057)	16056																									X																					
Baking and Pastry II	16057																									X																					
Banking and Finance	12101																						X																								
BioChem Workplace Experience	21048																																														
Bioengineering	21020																																														

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Biology	03051/03052																																							X	X			
Biomedical Innovation	14255																																								X			
Biomedical Workplace Experience	14998																																								X			
Biotechnical Engineering	21014																																						X	X				
Biotechnology in Agriculture	18308	X		X																																		X						
Brakes I	40204														X																													
Brakes II	40206														X																													
Business Communications	12009																						X	X	X								X											
Business Economics	12105																						X	X	X							X		X										
Business Essentials	12050														X	X						X	X	X	X	X																		
Business Law	12054																						X	X								X		X										
Business Management	12052																						X		X							X		X										
Business Management and Entrepreneurship Workplace Experience	12098																						X																					
Care of Athletes	14062																																											X
Career and Life Planning	19258																								X	X	X	X	X						X	X								
Career Connections	19298																								X	X	X	X	X						X									
Carpentry	17002										X											X																						
Carpentry II	38002										X																																	
Certified Medication Aide	36156																																										X	
Certified Nursing Assistant	14997																																										X	
Certified Protection Officer	44210																																X											
Chemistry	03101													X																								X	X	X				
Civil Engineering and Architecture	21012												X																															

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College Accounting	33109																						X																										
Community Connections	19297																									X	X	X	X																				
Composites I	40640								X																																								
Composites II	40650								X																																								
Comprehensive Workplace Experience in Architecture and Construction	38110										X																																						
Computer Applications (8-9)	10004/60004																X	X	X	X	X	X																X	X										
Computer Graphics	10202																				X	X	X	X																									
Computer Integrated Manufacturing	21010													X																																			
Computer Programming	10152																			X	X																												
Computer Programming - Other Languages	10156																			X	X																												
Computer-Aided Machining (CAM)	13204													X									X																										
Computer-Aided Machining (CAM) II	39205													X																																			
Computing Systems (8-9)	10002/60002																X	X	X		X																	X	X										
Consumer and Personal Finance	22210																						X	X																									
Corrections Officer	44215																																																
Crop and Range Management	18081							X																																									
Culinary Arts I (prerequisite for 16055)	16053																									X																							
Culinary Arts II	16055																									X																							
Culinary Essentials	16052																									X	X		X																				
Culinary Workplace Experience	16098																									X																							
Cyber Security I	10020																																																
Cyber Security II	10900																																																
Data Systems/Processing	10054																																																

Course Title	Course #	Agribusiness Systems 01.0101	Comp. - Agriculture Science 01.9999	Animal Science 01.0901	Biotechnology in Agriculture 23.1201	Food Prod. and Proc. Systems 01.0401	Natural Res. and Env. Systems 03.0101	Plant Systems 01.1101	Power, Structural and Tech. Systems 01.0201	Aviation Production 15.0000	Aviation Maintenance 47.0000	Construction and Design 46.0000	Energy 17.2071	Engineering and Appl. Math 14.0101	Manufacturing 48.0000	Mobile Equipment Maintenance 47.9999	Digital Media 09.0702	Info. Support and Services 11.0301	Network Systems 11.0901	Programming and Software Dev. 11.0201	Graphic Design 50.0499	Web and Digital Communications 11.1004	Business Mgmt and Entrepreneurship 52.0799	Business Finance 52.0801	Marketing 52.1402	Restaurant and Event Management 12.0504	Travel and Tourism 52.0901	Early Childhood Develop. 19.0709	Family, Consumer and Community Srv. 19.0799	F.A.I.D. 19.0999	Corrections, Security, Law and Law Enforcement 43.0199	Emergency and Fire Mgmt 43.0299	Government and Public Admin. 44.0401	Teaching/Training 13.0101	Biochemistry/Green/Hazmat 14.1401	Biomedical 14.0501	Health Science 51.9999								
Database Applications	10201																		X																										
DC Electronics	40460									X																																			
Dental Assistant	36054																																							X					
Diesel Engine Technology	40218														X																														
Digital Electronics	21008									X			X	X																															
Digital Marketing	35162																X					X	X																						
Digital Media Design and Production	30151																X																												
Digital Media Project Management	31091																X																												
Digital Media Technology	30104																X																												
Drafting	21102										X																																		
Drafting/CAD	21107								X	X	X	X											X																						
Drive Train Technology	40208															X																													
Early Childhood Application	19098																										X																		
Education Research and Innovation	19155																																												
Educational Leadership and Training A	19154																																												
Educational Leadership and Training B	19198																																												
Electrical and Security Systems	17113										X				X																														
Electronics and Electrical Systems I	40200															X																													
Electronics and Electrical Systems II	40202															X																													
Emergency Medical Tech (EMT) II	44060																																												
Emergency Medical Tech (EMT) II	44065																																												
Emerging Technologies	21053													X																															
Emerging Technologies - Computing	10040																				X																								

Course Title	Course #	Agribusiness Systems 01.0101	Comp. Agriculture Science 01.9999	Animal Science 01.0901	Biotechnology in Agriculture 23.1201	Food Prod. and Proc. Systems 01.0401	Natural Res. and Env. Systems 03.0101	Plant Systems 01.1101	Power, Structural and Tech. Systems 01.0201	Aviation Production 15.0000	Aviation Maintenance 47.0000	Construction and Design 46.0000	Energy 17.2071	Engineering and Appl. Math 14.0101	Manufacturing 48.0000	Mobile Equipment Maintenance 47.9999	Digital Media 09.0702	Info. Support and Services 11.0301	Network Systems 11.0901	Programming and Software Dev. 11.0201	Graphic Design 50.0499	Web and Digital Communications 11.1004	Business Mgmt and Entrepreneurship 52.0799	Business Finance 52.0801	Marketing 52.1402	Restaurant and Event Management 12.0504	Travel and Tourism 52.0901	Early Childhood Develop. 19.0709	Family, Consumer and Community Srv. 19.0799	F.A.I.D. 19.0999	Corrections, Security, Law and Law Enforcement 43.0199	Emergency and Fire Mgmt 43.0299	Government and Public Admin. 44.0401	Teaching/Training 13.0101	Biochemistry/Green/Hazmat 14.1401	Biomedical 14.0501	Health Science 51.9999				
EMS First Responder	44050																																X	X						X	
Energy Industry Fundamentals	41105												X																												
Energy Power and Society	41150												X																												
Engine Mechanical Repair	40216															X																									
Engine Performance I	40220															X																									
Engine Performance II	40222															X																									
Engineering Design	21006													X																											
Engineering Design and Development	21007													X																											
Entrepreneurship	12053															X																									
Environmental Resources and Wildlife Science	37506						X																															X			
Environmental Science	03003																																					X			
Equine Science	18104			X																																					
Essentials of FAID	30110																																					X			
Event Planning and Management	34052																									X	X														
Exploratory Agriculture	68001	X	X	X	X	X	X	X	X																																
FAID Studio	30160																																				X				
FAID Merchandising and Entrepreneurship	30112																																				X				
Family Studies	19255																											X	X									X			
Fashion Trends	30111																																				X				
Finance - Workplace Experience	12148																							X																	
Fire Science I	44100																																						X		
Fire Science II	44101																																						X		
Fire Service Special Operations	44080																																				X				

Course Title	Course #	Agribusiness Systems 01.0101	Comp. Agriculture Science 01.9999	Animal Science 01.0901	Biotechnology in Agriculture 23.1201	Food Prod. and Proc. Systems 01.0401	Natural Res. and Env. Systems 03.0101	Plant Systems 01.1101	Power, Structural and Tech. Systems 01.0201	Aviation Production 15.0000	Aviation Maintenance 47.0000	Construction and Design 46.0000	Energy 17.2071	Engineering and Appl. Math 14.0101	Manufacturing 48.0000	Mobile Equipment Maintenance 47.9999	Digital Media 09.0702	Info. Support and Services 11.0301	Network Systems 11.0901	Programming and Software Dev. 11.0201	Graphic Design 50.0499	Web and Digital Communications 11.1004	Business Mgmt and Entrepreneurship 52.0799	Business Finance 52.0801	Marketing 52.1402	Restaurant and Event Management 12.0504	Travel and Tourism 52.0901	Early Childhood Develop. 19.0709	Family, Consumer and Community Srv. 19.0799	F.A.I.D. 19.0999	Corrections, Security, Law and Law Enforcement 43.0199	Emergency and Fire Mgmt 43.0299	Government and Public Admin. 44.0401	Teaching/Training 13.0101	Biochemistry/Green/Hazmat 14.1401	Biomedical 14.0501	Health Science 51.9999						
Flight Training	40540									X																																	
Floriculture and Greenhouse Management	18057							X																																			
Food Science	19254				X																				X																X		
Forensic Science I	44225																																	X									
Forensic Science II	44226																																	X									
Foundations in Law	44305																																X		X								
Foundations of Electronics	21201									X			X	X																													
Foundations of Hospitality and Lodging	16101																									X																	
Foundations of Travel and Tourism	16151																								X	X																	
Foundations to Early Childhood Development	19052																						X				X																
Fundamentals of Electricity and Electronics	41170												X																														
Fundamentals of Emergency Services	14055																																								X		
Furniture and Cabinetry Fabrication	38007										X																																
Game Design and Authoring for the Web	10165																					X																					
General Service I	40150																						X																				
General Service II	40152																																										
General Service III	40154																																										
GIS Spatial Applications	21112																																										
GIS Technology	21058																																										
Governance Applications	43250																																										
Government and Public Administration Fundamentals	43105																																										
Government and Public Media Relations	04990																																										

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Graphic Design	05162/11154																X				X	X			X																	
Graphic Design Fundamentals	30102																X				X																					
Graphic Design Project Management	31090																				X																					
Hand and Power Tools	40400								X	X				X																												
Hazardous Materials for the First Responder	44070																															X	X									
Health Care Research and Clinical Skills A	14254																																							X		
Health Care Research and Clinical Skills B	36254																																							X		
Health Care Work Experience	36992																																							X		
Health Information (HIT)	14157																																							X		
Health Care Work Experience	36993																																							X		
Home Health Aide	36053																																							X		
Horticulture	18052	X		X	X		X																																			
Hospitality and Lodging Workplace Experience	16148																									X																
Human Body Systems	14102																																						X			
Human Growth and Development - Early Years	45004																										X	X						X								
HVAC Technology	17056										X	X		X																												
Hydraulics and Pneumatics	39302									X		X		X																												
IB Business and Management	12059																						X	X																		
IB Computing	10159																		X																							
IB Information Technology in Global Society	10007																					X																				
Information Support and Services I	10001																																									
Information Support and Services II	10051																																									
Information Support and Services III	10052																																									

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Information Support and Services IV	10097																X																												
Integrated Marketing Applications	12195																							X																					
Interactive Media	10203																				X																								
Interior Architectural Design	38212										X																																		
Interior Design I	19263										X																				X														
Interior Design II	22212										X																			X															
Internet Marketing	12162																				X																								
Internship	18048	X	X	X	X	X	X	X	X																																				
Introduction to Agriculture	18001	X	X	X	X	X	X	X	X																																				
Introduction to Computer Coding	31001																		X																										
Introduction to Drawing	30005																														X														
Introduction to Drawing and Design	30006																			X																									
Introduction to Emergency Medical Services	44005																																	X											
Introduction to Energy	41100												X																																
Introduction to Engineering	41310													X																															
Introduction to Environmental Science	41207												X																																
Introduction to Family and Consumer Sciences	19251																							X	X	X	X	X									X								
Introduction to Government and Public Administration	43001																																						X						
Introduction to Health Care	14000																																										X		
Introduction to Industrial Technology	38001								X	X	X				X	X																													
Introduction to Law, Public Safety, Corrections and Security (LPSCS)	44001																															X	X												
Introduction to Physical Computing	31002																		X																										



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Introduction to Transportation	40100														X																												
Introduction to Welding	13207													X																													
Investing	12107																						X																				
IT for Service Professions	44010																																										
Law Enforcement I	44200																																										
Law Enforcement II	44201																																										
Leadership Service in Action	19257																										X	X															
Legal Proceedings	44310																																										
Lifespan Development	45014																																										
Machine Tool Technology	13203														X																												
Marketing - Workplace Experience	12198																								X																		
Marketing Applications	35300																								X																		
Marketing Communications	35168																								X																		
Marketing Management	12166																								X																		
Marketing Research	12196																								X																		
Materials Science and Engineering	41355												X	X																													
Mechanical Power Transmission Systems	13302								X	X	X																																
Media and Public Relations	43115																X																										
Media Technology - Workplace Experience	10248																			X																							
Medical Imaging	14103																																										X
Medical Interventions	14105																																										X
Medical Terminology	14154																																										X
Meteorology	03006												X																														

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Mobile HVAC	40228															X																												
Natural Resources Management	18504	X				X																																			X			
Network Systems I	10001																		X																									
Network Systems II	10109																		X																									
Network Systems III	10112																		X																									
Network Systems IV	10147																		X																									
Nutrition and Wellness	19253																								X	X		X															X	
Orientation to Early Childhood Development	19051																										X								X									
Part Design	41500								X																																			
Particular Topics in Computer Programming	10160																			X																								
Particular Topics in Engineering	21015													X																												X		
Particular Topics in Media Technology	10204																					X																						
Pharmacology	14253																																									X	X	X
Pharmacy Technician	36157																																											X
Phlebotomy Technician	14104																																										X	
Photo Imaging	30105																X				X																							
Physical Therapy	14060																																										X	
Pipefitting Technology	17061										X																																	
Plant and Animal Science	18301	X																																										
Plant and Soil Science	18058	X		X	X		X																																				X	
Plumbing Technology	17058										X			X																														
Practical Law	44300																																X	X										
Principles of Advertising	12165																							X																				

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Principles of Applied Engineering	41320												X	X																															
Principles of Biomedical Science	14251																																									X			
Principles of Illustration	30101																				X																								
Principles of Marketing	12164																						X			X	X																		
Production Blueprint Reading	21108									X	X	X		X	X																														
Production Blueprint Reading II	39108														X																														
Production Methods I	13052									X	X				X																														
Production Methods II	39052														X																														
Production Welding I	39207																						X																						
Project Management	41350													X																															
Public Safety Physical Education	44020																																	X	X										
Relationships and Personal Development	19260																												X																
Remodel and Building Maintenance	17009											X			X								X																						
Research and Design for Preconstruction	21109										X																																		
Research and Design in Building Trades	17005										X																																		
Research and Development for Energy	41250												X																																
Research and Development for Energy Comprehensive	41260													X																															
Research in Agriculture	18206	X	X	X	X	X	X	X	X																																				
Risk Management and Insurance	12106																						X																						
Robotics	21009													X	X																												X		
Sheet Metal Technology	13205										X			X																															
Skilled Mechanical Crafts	17062										X																																		

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Small Animal Care	18102			X																																						
Small Engines	18410								X																																	
Small Engines and Powertrains I	40212															X																										
Small Engines and Powertrains II	40214															X																										
Special Projects and Research in Aviation	41520									X																																
Sports and Entertainment Marketing	12163																X							X																		
Sports Medicine I	14072																																								X	
Sports Medicine II	14073																																								X	
Steering and Suspension I	40224															X																										
Steering and Suspension II	40226															X																										
Teaching as a Career	19151																																									X
Teaching Internship	19152																																									X
Teaching Observation	42251																																									X
Technical Introduction to Computer Science	41010																			X																						
Tooling I	40600									X																																
Tooling II	40610									X																																
Unmanned Aircraft Systems (UAS)	40490										X																															
US History (unfunded)	04101																																									X
Video Production	30150																X																									
Web and Digital Communications Project Management	31096																					X																				
Web Page Design	10201																			X	X	X	X																			
Welding Processes I	39207															X																										
Welding Processes II	39208														X																											

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Wind Energy Operations	41160												X																																
Wireframe and Surfaces	41510								X																																				
Woodworking Principles	17007										X																																		
Work Experience in Aviation	40700									X																																			
Work Experience in Aviation - Comprehensive	40701									X																																			
Work Experience in LPSCS	44298																																	X	X										
Work Experience in Manufacturing	13348														X																														
Work Experience in Manufacturing - Comprehensive	13998														X																														
Work Experience in Transportation	40250														X																														
Work Experience in Transportation - Comprehensive	40251														X																														
Work-Based Learning in Information Support and Services	10098																X																												
Work-Based Learning in Network Systems	10148																	X																											
Work-Based Learning in Programming and Software Development	10198																		X																										
Workplace Experience	21048								X					X																															
Workplace Experience in Architecture and Construction	38100										X																																		
Workplace Experience in Engineering	41048								X				X																																

# Course Code Order

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03003	Environmental Science																																				X			
03006	Meteorology												X																											
03051/03052	Biology																																						X	X
03053	Anatomy and Physiology																																				X	X	X	
03056	AP Biology																																					X	X	
03101	Chemistry													X																							X	X	X	
03203	Applied Biochemistry																																			X				
03207	AP Environmental Science												X																							X				
04101	US History (unfunded)																																			X				
04104	AP US History (unfunded)																																		X					
04151	American Government (unfunded)																																		X					
04159	AP American Government (unfunded)																																		X					
04990	Government and Public Media Relations																																		X					
05162	Graphic Design (also listed as 11154)																X			X	X				X															
10001	Information Support and Services I																	X																						
10001	Network Systems I																		X																					
10002	Computing Systems (8-9) (also listed as 60002)																	X	X	X		X														X	X			
10004	Computer Applications (8-9) (also listed as 60004)																X	X	X	X	X	X														X	X			
10007	IB Information Technology in Global Society																																							
10020	Cyber Security I																		X	X	X																			
10040	Emerging Technologies - Computing																																							
10051	Information Support and Services II																	X																						



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10900	Cyber Security II																	X	X	X																									
11154	Graphic Design (also listed as 05162)																X				X	X		X																					
12009	Business Communications																					X	X	X										X											
12050	Business Essentials															X	X					X	X	X	X	X																			
12052	Business Management																					X	X										X	X											
12053	Entrepreneurship															X							X	X	X	X	X																		
12054	Business Law																						X	X								X	X												
12059	IB Business and Management																						X	X																					
12098	Business Management and Entrepreneurship Workplace Experience																						X																						
12101	Banking and Finance																						X																						
12104	Accounting																						X	X	X								X	X											
12105	Business Economics																						X	X	X								X	X											
12106	Risk Management and Insurance																						X																						
12107	Investing																						X																						
12148	Finance - Workplace Experience																						X																						
12162	Internet Marketing																				X																								
12163	Sports and Entertainment Marketing																X							X																					
12164	Principles of Marketing																						X		X	X																			
12165	Principles of Advertising																							X																					
12166	Marketing Management																							X																					
12195	Integrated Marketing Applications																							X																					
12196	Marketing Research																							X																					
12198	Marketing - Workplace Experience																							X																					



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12199	Advanced Marketing - Workplace Experience																							X																		
13052	Production Methods I								X	X					X																											
13203	Machine Tool Technology														X																											
13204	Computer-Aided Machining (CAM)														X							X																				
13205	Sheet Metal Technology											X			X																											
13207	Introduction to Welding														X																											
13302	Mechanical Power Transmission Systems									X		X			X																											
13348	Work Experience in Manufacturing														X																											
13998	Work Experience in Manufacturing - Comprehensive														X																											
14000	Introduction to Health Care																																								X	
14055	Fundamentals of Emergency Services																																								X	
14060	Physical Therapy																																								X	
14062	Care of Athletes																																								X	
14072	Sports Medicine I																																								X	
14073	Sports Medicine II																																								X	
14102	Human Body Systems																																								X	
14103	Medical Imaging																																								X	
14104	Phlebotomy Technician																																								X	
14105	Medical Interventions																																							X	X	
14154	Medical Terminology																																							X	X	
14157	Health Information (HIT)																																							X	X	
14251	Principles of Biomedical Science																																						X	X		
14253	Pharmacology																																					X	X	X		



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18002	Agriscience	X	X	X	X	X	X	X	X														X																					
18048	Internship	X	X	X	X	X	X	X	X																																			
18049	Advanced Internship	X	X	X	X	X	X	X	X																																			
18052	Horticulture		X		X	X		X																																				
18057	Floriculture and Greenhouse Management							X																																				
18058	Plant and Soil Science		X		X	X		X																															X					
18071	Applications in Horticulture							X																																				
18081	Crop and Range Management							X																																				
18101	Animal Science		X	X	X	X																																						
18102	Small Animal Care			X																																								
18103	Advanced Animal Science			X																																								
18104	Equine Science			X																																								
18105	Animal Health/Vet Tech			X																																								
18201	Agribusiness	X	X	X	X	X	X	X	X																																			
18202	Agriculture Entrepreneurship	X	X	X	X	X	X	X	X																																			
18203	Agricultural Leadership and Communications	X	X	X	X	X	X	X	X																																			
18206	Research in Agriculture	X	X	X	X	X	X	X	X																																			
18220	Applications in Agribusiness	X																																										
18301	Plant and Animal Science		X																																									
18302	Advanced Plant and Animal Science		X																																									
18305	Agricultural Food Science		X		X	X																																						
18308	Biotechnology in Agriculture		X		X																																							
18317	Advanced Food Science					X																																						

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18320	Applications in Biotechnology in Agriculture			X																																	X										
18401	Agricultural Mechanics								X																																						
18402	Advanced Agricultural Mechanics								X																																						
18403	Agricultural Structures								X																																						
18404	Agricultural Welding I								X						X								X																								
18407	Agricultural Welding II								X						X								X																								
18409	Agricultural Fabrication								X																																						
18410	Small Engines								X																																						
18411	Advanced Agricultural Power								X																																						
18504	Natural Resources Management		X				X																																								
19051	Orientation to Early Childhood Development																																														
19052	Foundations to Early Childhood Development																																														
19098	Early Childhood Application																																														
19151	Teaching as a Career																																														
19152	Teaching Internship																																														
19154	Educational Leadership and Training A																																														
19155	Education Research and Innovation																																														
19198	Educational Leadership and Training B																																														
19201	Apparel Production I																																														
19203	Apparel Production II																																														
19251	Introduction to Family and Consumer Sciences																										X	X	X	X	X																
19253	Nutrition and Wellness																										X	X		X																	
19254	Food Science						X																			X																					

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19255	Family Studies																										X	X								X								
19257	Leadership Service in Action																											X	X															
19258	Career and Life Planning																									X	X	X	X	X				X	X									
19260	Relationships and Personal Development																												X															
19263	Interior Design I										X																					X												
19297	Community Connections																								X	X	X	X																
19298	Career Connections																								X	X	X	X	X			X												
21006	Engineering Design													X																														
21007	Engineering Design and Development													X									X																					
21008	Digital Electronics									X				X	X																													
21009	Robotics													X	X																									X				
21012	Civil Engineering and Architecture													X																														
21013	Aerospace Engineering													X																														
21014	Biotechnical Engineering																																					X	X					
21015	Particular Topics in Engineering													X																									X					
21020	Bioengineering																																						X	X				
21010	Computer Integrated Manufacturing													X																														
21048	BioChem Workplace Experience																																					X						
21048	Workplace Experience								X					X																														
21053	Emerging Technologies													X																									X	X				
21058	GIS Technology																			X																								
21102	Drafting										X																														X			
21103	Architecture Design										X																															X		

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21107	Drafting/CAD									X	X			X	X								X																										
21108	Production Blueprint Reading									X	X	X		X	X																																		
21109	Research and Design for Preconstruction											X																																					
21112	GIS Spatial Applications																					X																											
21150	Advanced Drafting/CAD														X																																		
21201	Foundations of Electronics										X			X	X																																		
22210	Consumer and Personal Finance																						X	X					X																				
22212	Interior Design II											X																																					
30005	Introduction to Drawing																																																
30006	Introduction to Drawing and Design																																																
30100	21st Century Journalism																X																																
30101	Principles of Illustration																																																
30102	Graphic Design Fundamentals																X																																
30103	Audio/Video Production Fundamentals																X																																
30104	Digital Media Technology																X																																
30105	Photo Imaging																X			X																													
30110	Essentials of FAID																																																
30111	Fashion Trends																																																
30112	FAID Merchandising and Entrepreneurship																																																
30150	Video Production																X																																
30151	Digital Media Design and Production																X																																
30160	FAID Studio																																																
31001	Introduction to Computer Coding																																																

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31002	Introduction to Physical Computing																			X																							
31090	Graphic Design Project Management																				X																						
31091	Digital Media Project Management																X																										
31094	AP Computer Science Principles																		X																								
31096	Web and Digital Communications Project Management																					X																					
32200	Applied Business Development																						X		X																		
32998	Advanced Business Management and Entrepreneurship Workplace Experience																						X																				
33108	Advanced Accounting																							X																			
33109	College Accounting																							X																			
33110	Advanced Spreadsheet Applications																							X	X																		
33200	Advanced Finance - Workplace Experience																							X																			
34052	Event Planning and Management																								X	X																	
35162	Digital Marketing																X						X	X																			
35168	Marketing Communications																								X																		
35300	Marketing Applications																								X																		
36053	Home Health Aide																																									X	
36054	Dental Assistant																																									X	
36156	Certified Medication Aide																																									X	
36157	Pharmacy Technician																																									X	
36254	Health Care Research and Clinical Skills B																																									X	
36992	Health Care Work Experience																																									X	
36993	Health Care Work Experience																																										X

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37506	Environmental Resources and Wildlife Science					X																															X								
38001	Introduction to Industrial Technology								X	X	X				X	X																													
38002	Carpentry II											X																																	
38007	Furniture and Cabinetry Fabrication											X																																	
38010	Advanced Materials Technology											X			X																														
38050	Advanced Studies											X																																	
38100	Workplace Experience in Architecture and Construction											X																																	
38110	Comprehensive Workplace Experience in Architecture and Construction											X																																	
38212	Interior Architectural Design											X																																	
39010	Automated Integrated Systems														X																														
39052	Production Methods II														X																														
39108	Production Blueprint Reading II														X																														
39205	Computer-Aided Machining (CAM) II														X																														
39207	Production Welding I																						X																						
39207	Welding Processes I														X																														
39208	Welding Processes II														X																														
39302	Hydraulics and Pneumatics									X		X			X																														
40050	Automotive Information															X																													
40100	Introduction to Transportation															X																													
40150	General Service I															X						X																							
40152	General Service II															X																													
40154	General Service III															X																													



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40200	Electronics and Electrical Systems I															X																												
40202	Electronics and Electrical Systems II															X																												
40204	Brakes I															X																												
40206	Brakes II															X																												
40208	Drive Train Technology															X																												
40210	Alternative Power															X																												
40212	Small Engines and Powertrains I															X																												
40214	Small Engines and Powertrains II															X																												
40216	Engine Mechanical Repair															X																												
40218	Diesel Engine Technology															X																												
40220	Engine Performance I															X																												
40222	Engine Performance II															X																												
40224	Steering and Suspension I															X																												
40226	Steering and Suspension II															X																												
40228	Mobile HVAC															X																												
40250	Work Experience in Transportation															X																												
40251	Work Experience in Transportation - Comprehensive															X																												
40300	Auto Collision I															X							X																					
40302	Auto Collision II															X																												
40310	Auto Refinishing I															X																												
40312	Auto Refinishing II															X																												
40400	Hand and Power Tools								X	X					X																													
40410	Aviation Fundamentals								X	X																																		

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40420	Aviation Systems									X	X																																								
40450	AC Electronics										X																																								
40460	DC Electronics										X																																								
40490	Unmanned Aircraft Systems (UAS)										X																																								
40540	Flight Training										X																																								
40600	Tooling I									X																																									
40610	Tooling II									X																																									
40620	Aerostructures I									X																																									
40630	Aerostructures II									X																																									
40640	Composites I									X																																									
40650	Composites II									X																																									
40700	Work Experience in Aviation										X																																								
40701	Work Experience in Aviation - Comprehensive										X																																								
41010	Technical Introduction to Computer Science																		X																																
41048	Workplace Experience in Engineering								X					X																																					
41100	Introduction to Energy												X																																						
41105	Energy Industry Fundamentals												X																																						
41150	Energy Power and Society												X																																						
41160	Wind Energy Operations												X																																						
41170	Fundamentals of Electricity and Electronics												X																																						
41207	Introduction to Environmental Science												X																																						
41250	Research and Development for Energy												X																																						

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41260	Research and Development for Energy Comprehensive												X																																
41270	Advanced Electricity and Electronics												X																																
41310	Introduction to Engineering													X																															
41320	Principles of Applied Engineering													X	X																														
41350	Project Management														X																														
41355	Materials Science and Engineering												X	X																															
41500	Part Design									X																																			
41505	Assembly Design									X																																			
41510	Wireframe and Surfaces									X																																			
41515	Aerospace Drawings									X																																			
41520	Special Projects and Research in Aviation									X																																			
42251	Teaching Observation																																												
43001	Introduction to Government and Public Administration																																												
43105	Government and Public Administration Fundamentals																																												
43115	Media and Public Relations																X																												
43250	Governance Applications																																												
44001	Introduction to Law, Public Safety, Corrections and Security (LPSCS)																																												
44005	Introduction to Emergency Medical Services																																												
44010	IT for Service Professions																																												
44020	Public Safety Physical Education																																												
44050	EMS First Responder																																												
44060	Emergency Medical Tech (EMT) II																																												
44065	Emergency Medical Tech (EMT) II																																												



## 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

## SUCCESS DEFINED

A successful Kansas high school graduate has the

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

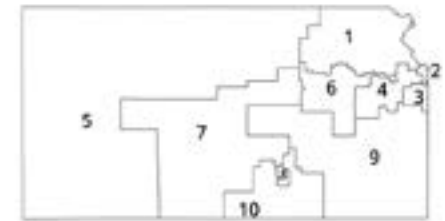
to be successful in postsecondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remediation.

## OUTCOMES

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



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