Kansas Career Cluster Guidance Handbook 2027-2028

KANSAS CAREER AND TECHNICAL EDUCATION

KANSAS CAREER CLUSTER PATHWAY DESIGN MODELS

KANSAS STATE DEPARTMENT OF EDUCATION

Kansas leads the world in the success of each student.

Jul. 16, 2026

Contents

5 **Kansas Career and Technical Education**

7 **Kansas CTE Career Pathways Infographics**

7 Elementary School Level Graphic
9 Middle School Level Graphic
10 Secondary School Level Graphic

11 **Kansas Secondary CTE Contacts**

15 **Kansas Career Cluster Pathways**

17 **AGRICULTURE**

18 *Agriculture Career Cluster Design*
18 Agricultural Technology and Mechanical Systems Pathway
20 Animal Science, Health and Related Industries Pathway
21 Diversified Agricultural Science Pathway
23 Food Products and Processing Systems Pathway
24 Plant Science and Industry Operations Pathway

25 *Energy and Natural Resources Career Cluster Design*
25 Energy Pathway
26 Natural Resources and Environmental Sustainability Pathway

27 **BUSINESS**

28 *Management and Entrepreneurship Career Cluster Design*
28 Business Management and Entrepreneurship Pathway

29 *Financial Services Career Cluster Design*
29 Business Finance Pathway

31 *Marketing and Sales Career Cluster Design*
31 Marketing Pathway

33 *Hospitality, Events and Tourism Career Cluster Design*
33 Restaurant and Event Management Pathway
35 Travel and Tourism Pathway

37 **DESIGN, PRODUCTION & REPAIR**

38 *Advanced Manufacturing Career Cluster Design*
38 Automation Engineering and Industrial Machine Maintenance Technology
40 Aviation Production Pathway
42 Engineering and Design Pathway
43 Manufacturing Pathway

45 *Construction Career Cluster Design*
45 Construction and Design Pathway

47 *Supply Chain and Transportation Career Cluster Design*
47 Aviation Maintenance and Operations Pathway
48 Logistics and Supply Chain Management Pathway
49 Vehicle Maintenance and Repair Pathway

CONTENTS

51 **HEALTH & HUMAN SERVICES**

52 *Healthcare and Human Services Career Cluster Design*
52 Biotechnology Pathway
54 Family, Community and Consumer Services Pathway
55 Health Science Pathway

57 **MEDIA & TECHNOLOGY**

58 *Digital Technology Career Cluster Design*
58 Information Support and Services Pathway
59 Media Design and Communications Pathway
61 Networking and Telecommunications Pathway
62 Programming and Software Development Pathway

63 **PUBLIC SERVICES**

64 *Education Career Cluster Design*
64 Early Childhood Development and Services Pathway
65 Teaching/Training

66 *Public Service and Safety Career Cluster Design*
66 Government and Public Administration Pathway
68 Corrections, Security, Law and Law Enforcement Services Pathway
70 Emergency and Fire Management Services Pathway

71 **Kansas CTE Terminology**

77 **Advisory Committee Information**

79 **Pathway Crossover Course Information**

79 Alphabetical by Course Title

90 Listed by Course Number

Kansas Career and Technical Education

Learning that works for Kansas

The term "career and technical education" means organized educational activities that—

(A) offer a sequence of courses that—

(i) provides 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, which shall be, at the secondary level, aligned with the challenging State academic standards adopted by a State under section 6311(b)(1) of this title;

(ii) provides technical skill proficiency or a recognized postsecondary credential, which may include an industry-recognized credential, a certificate, or an associate degree; and

(iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph;

(B) 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;

(C) to the extent practicable, coordinate between secondary and postsecondary education programs through programs of study, which may include coordination through articulation agreements, early college high school programs, dual or concurrent enrollment program opportunities, or other credit transfer agreements that provide postsecondary credit or advanced standing; and

(D) may include career exploration at the high school level or as early as the middle grades (as such term is defined in section 7801 of this title).

20 USC Ch. 44: CAREER AND TECHNICAL EDUCATION[1]

- Common Career Technical Core and CTE Course Competencies (website)[2]

1 20 USC Ch. 44: CAREER AND TECHNICAL EDUCATION. (n.d.-b). *https://uscode.house.gov/view.xhtml?path=/prelim@title20/chapter44&edition=prelim*

2 Kansas State Department of Education [KSDE]. CTE Course Competencies and Indicators. *https://www.ksde.gov/student-success/cte/course-competencies-and-indicators*

KANSAS CAREER AND TECHNICAL EDUCATION

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Kansas CTE Career Pathways Infographics

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

Elementary Version

- Six Industries.



Middle School Version

- Six Industries.
- Thirteen Career Clusters.



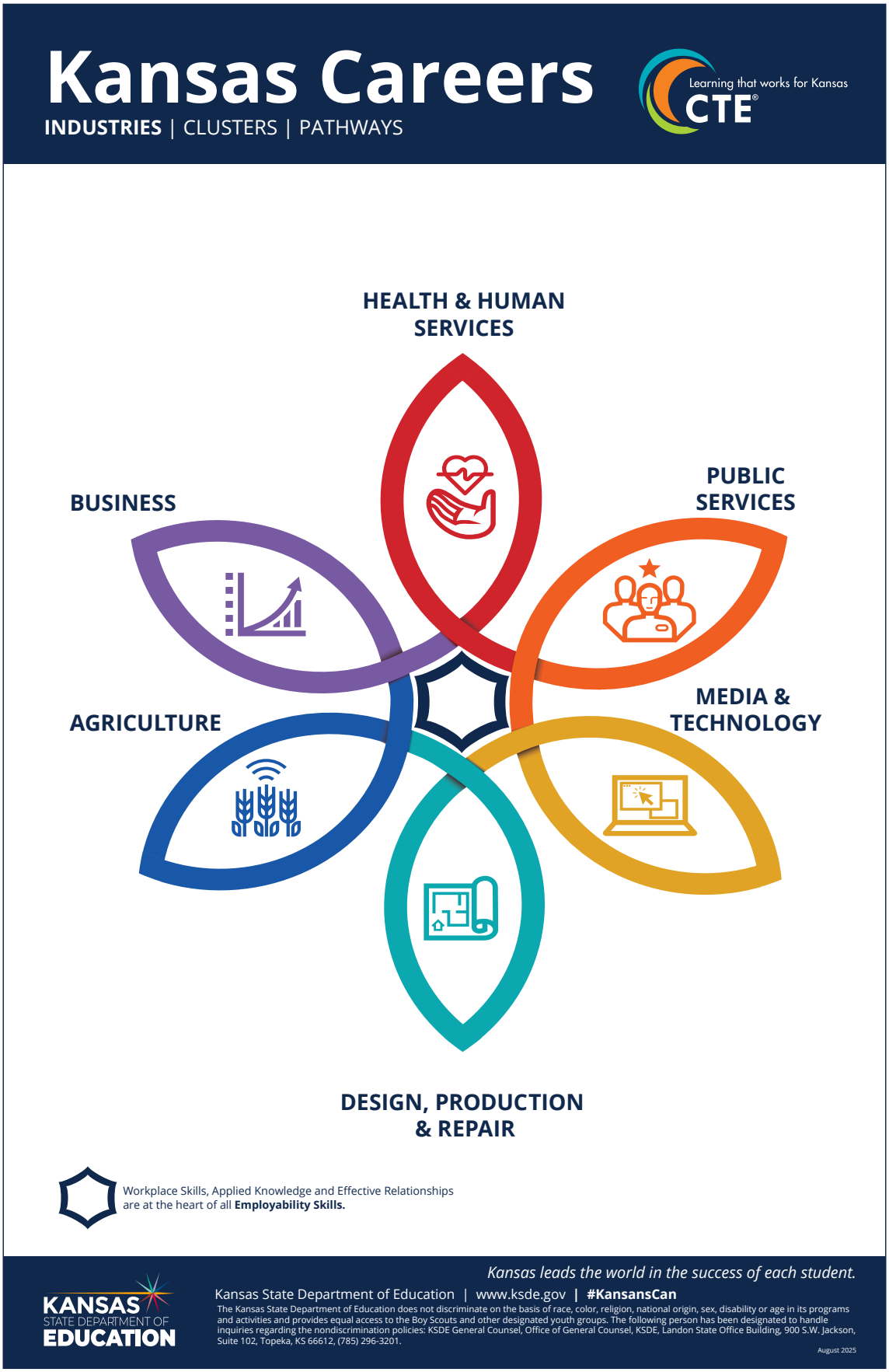
Secondary Version

- Six Industries.
- Thirteen Career Clusters.
- Thirty-two Pathways.



INFOGRAPHICS

Elementary School Level Graphic

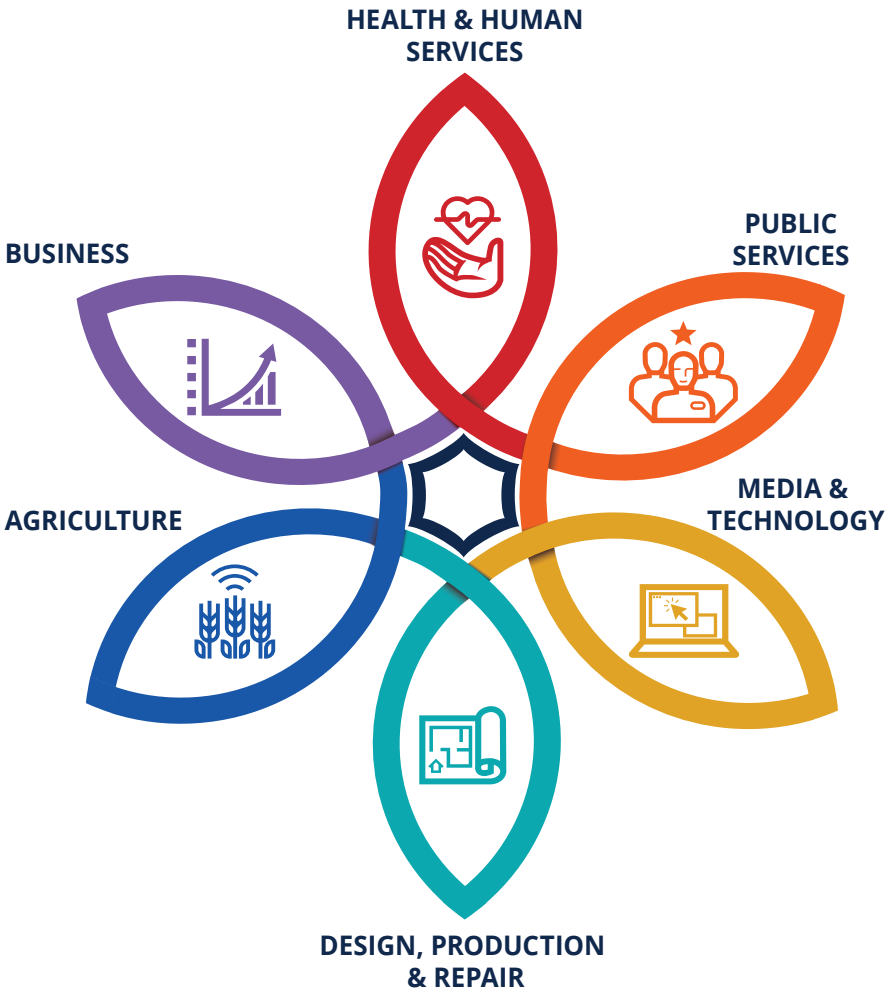


Middle School Level Graphic

Kansas Careers

INDUSTRIES | **CLUSTERS** | PATHWAYS

Learning that works for Kansas CTE®



Workplace Skills, Applied Knowledge and Effective Relationships are at the heart of all **Employability Skills.**

- **HEALTH & HUMAN SERVICES**
  Healthcare & Human Services
- **PUBLIC SERVICES**
  Education
  Public Service & Safety
- **MEDIA & TECHNOLOGY**
  Digital Technology
- **DESIGN, PRODUCTION & REPAIR**
  Advanced Manufacturing
  Construction
  Supply Chain & Transportation
- **AGRICULTURE**
  Agriculture
  Energy & Natural Resources
- **BUSINESS**
  Financial Services
  Hospitality, Events & Tourism
  Management & Entrepreneurship
  Marketing & Sales

Kansas leads the world in the success of each student.

KANSAS STATE DEPARTMENT OF EDUCATION

Kansas State Department of Education | www.ksde.gov | **#KansansCan**

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

August 2025

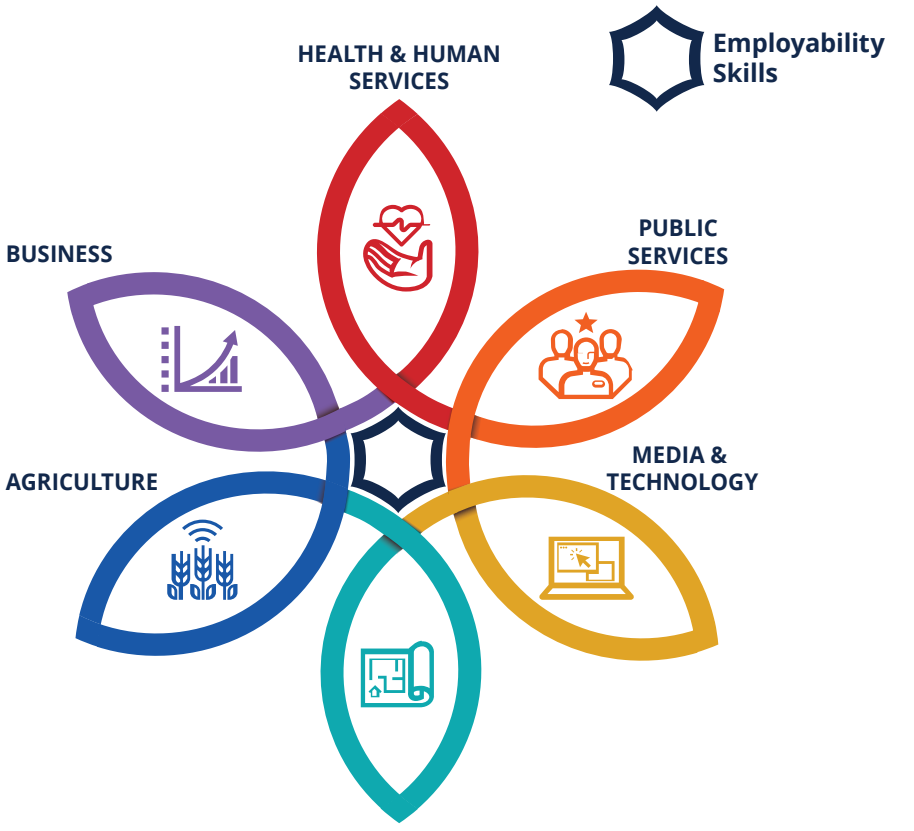
INFOGRAPHICS

Secondary School Level Graphic

Kansas Careers

INDUSTRIES | CLUSTERS | **PATHWAYS**

Learning that works for Kansas CTE®



HEALTH & HUMAN SERVICES

Healthcare & Human Services
- Biotechnology
- Family, Community & Consumer Services
- Health Science

MEDIA & TECHNOLOGY

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

AGRICULTURE

Agriculture
- Agricultural Technology & Mechanical Systems
- Animal Science, Health & Related Industries
- Diversified Agricultural Science
- Food Products & Processing Systems
- Plant Science & Industry Operations

Energy & Natural Resources
- Energy
- Natural Resources & Environmental Sustainability

PUBLIC SERVICES

Education
- Early Childhood Development & Services
- Teaching/Training

Public Service & Safety
- Corrections, Security, Law & Law Enforcement Services
- Emergency & Fire Management Services
- Government & Public Administration

DESIGN, PRODUCTION & REPAIR

Advanced Manufacturing
- Automation Engineering & Industrial Machine Maintenance Technology
- Aviation Production
- Engineering & Design
- Manufacturing

Construction
- Construction & Design

Supply Chain & Transportation
- Aviation Maintenance & Operations
- Logistics & Supply Chain Management
- Vehicle Maintenance & Repair

BUSINESS

Financial Services
- Business Finance

Hospitality, Events & Tourism
- Restaurant & Event Management
- Travel & Tourism

Management & Entrepreneurship
- Business Management & Entrepreneurship

Marketing & Sales
- Marketing

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May 18, 2026

Kansas Secondary CTE Contacts

CAREER AND TECHNICAL EDUCATION

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KANSAS CAREER CLUSTER PATHWAYS

AGRICULTURE

Agriculture Career Cluster Design

- Agricultural Technology and Mechanical Systems Pathway
- Animal Science, Health and Related Industries Pathway
- Diversified Agricultural Science Pathway
- Food Products and Processing Systems Pathway
- Plant Science and Industry Operations Pathway

Anthony Meals
Email: anthony.meals@ksde.gov
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Energy and Natural Resources Career Cluster Design

- Energy Pathway

Kevin Bronson
Email: kevin.bronson@ksde.gov
Phone: (785) 296-6214

- Natural Resources and Environmental Sustainability Pathway

Anthony Meals
Email: anthony.meals@ksde.gov
Phone: (785) 296-3956

BUSINESS

Management and Entrepreneurship Career Cluster Design

- Business Management and Entrepreneurship Pathway

Financial Services Career Cluster Design

- Business Finance Pathway

Marketing and Sales Career Cluster Design

- Marketing Pathway

ChapLynn Askins
Email: chaplynn.askins@ksde.gov
Phone: (785) 296-3152

Hospitality, Events and Tourism Career Cluster Design

- Restaurant and Event Management Pathway
- Travel and Tourism Pathway

Heather Campbell
Email: heather.campbell@ksde.gov
Phone: (785) 296-2307

KSDE SECONDARY LEVEL CTE CONTACTS

DESIGN, PRODUCTION & REPAIR

Advanced Manufacturing Career Cluster Design

- Automation Engineering and Industrial Machine Maintenance Technology Pathway
- Aviation Production Pathway
- Engineering and Design Pathway

Brian Swaim
Email: brian.swaim@ksde.gov
Phone: (785) 296-2221

- Manufacturing Pathway

Kevin Bronson
Email: kevin.bronson@ksde.gov
Phone: (785) 296-6214

Construction Career Cluster Design

- Construction and Design Pathway

Kevin Bronson
Email: kevin.bronson@ksde.gov
Phone: (785) 296-6214

Supply Chain and Transportation Career Cluster Design

- Aviation Maintenance and Operations Pathway

Brian Swaim
Email: brian.swaim@ksde.gov
Phone: (785) 296-2221

- Logistics and Supply Chain Management Pathway

ChapLynn Askins
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- Vehicle Maintenance and Repair Pathway

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HEALTH & HUMAN SERVICES

Healthcare and Human Services Career Cluster Design

- Biotechnical Pathway
- Health Science Pathway

Brian Swaim
Email: brian.swaim@ksde.gov
Phone: (785) 296-2221

- Family, Community and Consumer Services Pathway

Heather Campbell
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MEDIA & TECHNOLOGY

Digital Technology Career Cluster Design

- Information Support and Services Pathway
- Media Design and Communications Pathway
- Networking and Telecommunications Pathway
- Programming and Software Development Pathway

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PUBLIC SERVICES

Education Career Cluster Design

- Early Childhood Development & Services Pathway
- Teaching/Training Pathway

Heather Campbell
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Public Service and Safety Career Cluster Design

- Corrections, Security, Law and Law Enforcement Services Pathway
- Emergency and Fire Management Services Pathway

Kevin Bronson
Email: kevin.bronson@ksde.gov
Phone: (785) 296-6214

- Government and Public Administration Pathway

ChapLynn Askins
Email: chaplynn.askins@ksde.gov
Phone: (785) 296-3152

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

BUSINESS PROFESSIONALS OF AMERICA (BPA)

Marcy Cross
Email: kansasbpa.cross@gmail.com
Phone: (316) 794-4190

DECA

Logan Gauby
Email: lmgauby@ksu.edu
Phone: (785) 532-6180

FUTURE BUSINESS LEADERS OF AMERICA (FBLA)

Connie Lindell
Email: conniefbla@gmail.com
Phone: (785) 760-1038

FAMILY, CAREER & COMMUNITY LEADERS OF AMERICA (FCCLA)

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FFA Executive Secretary

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SKILLSUSA

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OFFICE OF CIVIL RIGHTS VISITS

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Phone: (785) 296-3860

RELATED AREAS

K-12 CAREER DEVELOPMENT

Phone: (785) 296-8109

KANSAS COURSE CODE MANAGEMENT SYSTEM (KCCMS)

Email: kccms@ksde.gov

KANSAS INDIVIDUAL DATA ON STUDENTS (KIDS)

Email: kids@ksde.gov

PATHWAYS AUTHENTICATED APPLICATION ASSISTANCE

Email: pathwayshelpdesk@ksde.gov

KIDS STUDENT COURSE DATA SUBMISSION (KCAN)

Email: kids@ksde.gov

EDUCATOR DATA COLLECTION SYSTEM (EDCS)

Shane Carter
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Phone: (785) 296-2289

Kansas Career Cluster Pathways

Pathway Classification of Instructional Program (CIP) Codes

Nontraditional female pathway.

Nontraditional male pathway.



AGRICULTURE

Agriculture Career Cluster Design

- Agricultural Technology and Mechanical Systems Pathway ____ 01.0201
- Animal Science, Health and Related Industries Pathway ____ 01.0901
- Diversified Agricultural Science Pathway ____ 01.0000
- Food Products and Processing Systems Pathway ____ 01.0401
- Plant Science and Industry Operations Pathway ____ 01.1101

Energy and Natural Resources Career Cluster Design

- Energy Pathway ____ 14.4801
- Natural Resources and Environmental Sustainability Pathway ____ 03.0101



BUSINESS

Management and Entrepreneurship Career Cluster Design

- Business Management and Entrepreneurship Pathway ____ 52.0201

Financial Services Career Cluster Design

- Business Finance Pathway ____ 52.0801

Marketing and Sales Career Cluster Design

- Marketing Pathway ____ 52.1402

Hospitality, Events and Tourism Career Cluster Design

- Restaurant and Event Management Pathway ____ 12.0504
- Travel and Tourism Pathway ____ 52.0901

KANSAS CAREER CLUSTER PATHWAYS

Nontraditional female pathway.

Nontraditional male pathway.



DESIGN, PRODUCTION AND REPAIR

Advanced Manufacturing Career Cluster Design

- Automation Engineering and Industrial Machine Maintenance Technology Pathway ___ 15.0406
- Aviation Production Pathway ___ 15.0801
- Engineering and Design Pathway ___ 14.4101
- Manufacturing Pathway ___ 48.0503

Construction Career Cluster Design

- Construction and Design Pathway ___ 46.0000

Supply Chain and Transportation Career Cluster Design

- Aviation Maintenance and Operations Pathway ___ 47.0607
- Logistics and Supply Chain Management ___ 52.0203
- Vehicle Maintenance and Repair Pathway ___ 47.0600



HEALTH AND HUMAN SERVICES

Healthcare and Human Services Career Cluster Design

- Biotechnology Pathway ___ 26.1201
- Health Science Pathway ___ 51.3901
- Family, Community and Consumer Services Pathway ___ 44.0000



MEDIA AND TECHNOLOGY

Digital Technology Career Cluster Design

- Information Support and Services Pathway ___ 11.1006
- Media Design and Communications Pathway ___ 11.0801
- Networking and Telecommunications Pathway ___ 11.0901
- Programming and Software Development Pathway ___ 11.0201



PUBLIC SERVICES

Education Career Cluster Design

- Early Childhood Development and Services Pathway ___ 19.0709
- Teaching/Training Pathway ___ 13.0101

Public Service and Safety Career Cluster Design

- Corrections, Security, Law and Law Enforcement Services Pathway ___ 43.0199
- Emergency and Fire Management Services Pathway ___ 43.0299
- Government and Public Administration Pathway ___ 44.0401

KANSAS CAREER GUIDANCE HANDBOOK 2027-2028

AGRICULTURE



AGRICULTURE CAREER CLUSTER DESIGN
Agricultural Technology and Mechanical Systems Pathway

CIP CODE 01.0201

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Agriculture	18001	1	Choose one course 18001 or 68001.
Agriculture Explorations I (Middle School)	68001	0.5	Choose one course 18001 or 68001.
Agriculture Explorations II (Middle School)	68002	0.5	Prerequisite course required; see competency profile. Can not be taught without 68001 in the pathway.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Agriscience	18002	1	
Agricultural Mechanics	18401	1	Choose one course from this section: 18401, 18404, 39207 or 18410.
Agricultural Welding I	18404	1	Choose one course from this section: 18401, 18404, 39207 or 18410. Choose 18404 or 39207, not both.
Welding Processes I	39207	1	Choose one course from this section: 18401, 18404, 39207 or 18410. Choose 18404 or 39207, not both.
Small Power Systems	18410	1	Choose one course from this section: 18401, 18404, 39207 or 18410.

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Agricultural Technology and Mechanical Systems Work Based Learning	18048	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Agricultural Technology and Mechanical Systems Work Based Learning	18049	1	Prerequisite course required; see competency profile.
Agribusiness Management	18201	1	
Agricultural Entrepreneurship	18202	1	
Agricultural Leadership & Communications	18203	1	
Research in Agriculture	18206	1	

APPROVED PATHWAY:

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

Agricultural Technology and Mechanical Systems Pathway CIP CODE 01.0201

*Choose **one course** from below for pathway approval.*

Title	Code	Credit	Special Considerations
Advanced Agricultural Mechanics	18402	1	Prerequisite course required; see competency profile.
Agricultural Construction	18403	1	
Agricultural Welding II	18407	1	Choose 18407 or 39208, not both. Prerequisite course required; see competency profile.
Welding Processes II	39208	1	Choose 18407 or 39208, not both. Prerequisite course required; see competency profile.
Agricultural Fabrication	18409	1	
Advanced Agricultural Power	18411	1	Prerequisite course required; see competency profile.
Agricultural Engineering & Technology	18415	1	

Animal Science, Health and Related Industries Pathway

CIP CODE 01.0901

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Agriculture	18001	1	Choose one course 18001 or 68001.
Agriculture Explorations I (Middle School)	68001	0.5	Choose one course 18001 or 68001.
Agriculture Explorations II (Middle School)	68002	0.5	Prerequisite course required; see competency profile. Can not be taught without 68001 in the pathway.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Agriscience	18002	1	
Animal Science	18101	1	Required course for pathway approval.
Plant & Animal Science	18301	1	
Agricultural Food Science	18305	1	
Agricultural Biotechnology	18308	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Animal Science, Health and Related Industries Work Based Learning	18148	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Animal Science, Health and Related Industries Work Based Learning	18150	1	Prerequisite course required; see competency profile.
Agribusiness Management	18201	1	
Agricultural Entrepreneurship	18202	1	
Agricultural Leadership & Communications	18203	1	
Research in Agriculture	18206	1	
Advanced Plant & Animal Science	18302	1	Prerequisite course required; see competency profile.

*Choose **one course** from below for pathway approval.*

Title	Code	Credit	Special Considerations
Small Animal Care	18102	1	
Advanced Animal Science	18103	1	Prerequisite course required; see competency profile.
Equine Science	18104	1	
Animal Health	18105	1	

APPROVED PATHWAY:

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

Diversified Agricultural Science Pathway

CIP CODE 01.0000

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Agriculture	18001	1	Choose one course 18001 or 68001.
Agriculture Explorations I (Middle School)	68001	0.5	Choose one course 18001 or 68001.
Agriculture Explorations II (Middle School)	68002	0.5	Prerequisite course required; see competency profile. Can not be taught without 68001 in the pathway.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Agriscience	18002	1	
Horticulture	18052	1	
Plant & Soil Science	18058	1	
Animal Science	18101	1	
Plant & Animal Science	18301	1	
Agricultural Food Science	18305	1	
Agricultural Biotechnology	18308	1	
Agricultural Mechanics	18401	1	
Agricultural Welding I	18404	1	Choose 18404 or 39207, not both.
Welding Processes I	39207	1	Choose 18404 or 39207, not both.
Small Power Systems	18410	1	
Natural Resource Management	18504	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPROVED PATHWAY:

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

Diversified Agricultural Science Pathway CIP CODE 01.0000

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Capstone in Agriculture	18003	1	
Diversified Agricultural Science Work Based Learning	18338	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Diversified Agricultural Science Work Based Learning	18400	1	Prerequisite course required; see competency profile.
Small Animal Care	18102	1	
Equine Science	18104	1	
Agribusiness Management	18201	1	
Agricultural Entrepreneurship	18202	1	
Agricultural Leadership & Communications	18203	1	
Research in Agriculture	18206	1	
Advanced Plant & Animal Science	18302	1	Prerequisite course required; see competency profile.
Sustainable/Alternative Agriculture	18310	1	
Agricultural Construction	18403	1	
Agricultural Fabrication	18409	1	
Agricultural Engineering & Technology	18415	1	

Food Products and Processing Systems Pathway

CIP CODE 01.0401

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Agriculture	18001	1	Choose one course 18001 or 68001.
Agriculture Explorations I (Middle School)	68001	0.5	Choose one course 18001 or 68001.
Agriculture Explorations II (Middle School)	68002	0.5	Prerequisite course required; see competency profile. Can not be taught without 68001 in the pathway.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Agriscience	18002	1	
Horticulture	18052	1	
Plant & Soil Science	18058	1	
Animal Science	18101	1	

*Select **one course** from the list below for pathway approval.*

Title	Code	Credit	Special Considerations
Agricultural Food Science	18305	1	Choose one course from this section: 18305 or 19254.
Food Science	19254	1	Choose one course from this section: 18305 or 19254.

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Food Products and Processing Systems Work Based Learning	18348	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Food Products and Processing Systems Work Based Learning	18350	1	Prerequisite course required; see competency profile.
Agribusiness Management	18201	1	
Agricultural Entrepreneurship	18202	1	
Agricultural Leadership & Communications	18203	1	
Research in Agriculture	18206	1	
Advanced Food Science	18317	1	Prerequisite course required; see competency profile. This course is required for pathway approval.

APPROVED PATHWAY:

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

Plant Science and Industry Operations Pathway

CIP CODE 01.1101

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Agriculture	18001	1	Choose one course 18001 or 68001.
Agriculture Explorations I (Middle School)	68001	0.5	Choose one course 18001 or 68001.
Agriculture Explorations II (Middle School)	68002	0.5	Prerequisite course required; see competency profile. Can not be taught without 68001 in the pathway.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Agriscience	18002	1	

*Select **one course** from the list below for pathway approval.*

Title	Code	Credit	Special Considerations
Horticulture	18052	1	
Plant & Soil Science	18058	1	
Plant & Animal Science	18301	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Plant Science and Industry Operations Work Based Learning	18098	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Plant Science and Industry Operations Work Based Learning	18110	1	Prerequisite course required; see competency profile.
Agribusiness Management	18201	1	
Agricultural Entrepreneurship	18202	1	
Agricultural Leadership & Communications	18203	1	
Research in Agriculture	18206	1	

*Select **one course** from the list below for pathway approval.*

Title	Code	Credit	Special Considerations
Horticulture, Floriculture & Greenhouse Management	18057	1	
Nursery & Landscape Operations	18067	1	
Crop & Range Management	18081	1	
Advanced Plant & Animal Science	18302	1	Prerequisite course required; see competency profile.

APPROVED PATHWAY:

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

ENERGY AND NATURAL RESOURCES CAREER CLUSTER DESIGN

Energy Pathway

CIP CODE 14.4801

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Energy	41100	0.5	Required course for pathway approval.
Introduction to Environmental Science	41207	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Meteorology	03006	1	
AP Environmental Science	03207	1	
Mechanical Drive Systems	13302	0.5	
Foundations of Electronics	21201	1	Choose either 21201 or 41170, but not both.
Energy Industry Fundamentals	41105	1	Required course for pathway approval.
Energy, Power & Society	41150	1	
Wind Energy Operations	41160	1	
Fundamentals of Electricity & Electronics	41170	1	Choose either 21201 or 41170, but not both.
Principles of Applied Engineering	41320	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
HVAC Technology	17056	0.5	
Fluid Power	39302	0.5	
Energy Work Based Learning	41250	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Energy Work Based Learning	41260	1	Prerequisite course required; see competency profile.
Advanced Electricity & Electronics	41270	0.5	Prerequisite course required; see competency profile.
Materials Science in Engineering	41355	0.5	

APPROVED PATHWAY:

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

Natural Resources and Environmental Sustainability Pathway

CIP CODE 03.0101

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Agriculture	18001	1	Choose one course 18001 or 68001.
Agriculture Explorations I (Middle School)	68001	0.5	Choose one course 18001 or 68001.
Agriculture Explorations II (Middle School)	68002	0.5	Prerequisite course required; see competency profile. Can not be taught without 68001 in the pathway.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Agriscience	18002	1	

*Choose **one course** from below for pathway approval.*

Title	Code	Credit	Special Considerations
Wildlife & Recreation Management	18501	1	
Natural Resource Management	18504	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Natural Resources and Environmental Sustainability Work Based Learning	18548	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Natural Resources and Environmental Sustainability Work Based Learning	18550	1	Prerequisite course required; see competency profile.
Agribusiness Management	18201	1	
Agricultural Entrepreneurship	18202	1	
Agricultural Leadership & Communications	18203	1	
Research in Agriculture	18206	1	

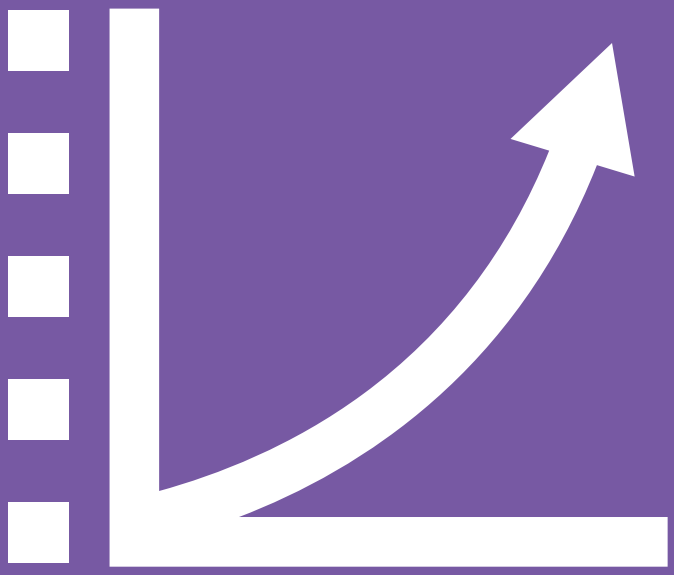
*Choose **one course** from below for pathway approval.*

Title	Code	Credit	Special Considerations
Sustainable/Alternative Agriculture	18310	1	
Environmental Resources & Ecology	37506	1	

APPROVED PATHWAY:

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

BUSINESS



MANAGEMENT AND ENTREPRENEURSHIP CAREER CLUSTER DESIGN

Business Management and Entrepreneurship Pathway

CIP CODE 52.0201

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Business Essentials	12050	0.5	Required course for pathway approval. Business Essentials (12050) can integrate with Computer Applications (10004).
AP Intro to Business	12051	0.5	Districts may map both 12050 and 120S1; however, students may only take either 12050 or 12051 for credit.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Business Communications	12009	0.5	Required course for pathway approval
Business Management	12052	0.5	Required course for pathway approval
Entrepreneurship	12053	0.5	Required course for pathway approval

Optional Supportive Courses

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

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Business Management & Entrepreneurship Work Based Learning	12098	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Applied Business Development	32200	1	Required course for pathway approval.
Advanced Business Management & Entrepreneurship Work Based Learning	32998	1	Prerequisite course required; see competency profile.

APPROVED PATHWAY:

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

FINANCIAL SERVICES CAREER CLUSTER DESIGN
Business Finance Pathway

CIP CODE 52.0801

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Business Essentials	12050	0.5	Required course for pathway approval. Business Essentials (12050) can integrate with Computer Applications (10004).
AP Intro to Business	12051	0.5	Districts may map both 12050 and 120S1; however, students may only take either 12050 or 12051 for credit.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Accounting	12104	1	Required course for pathway approval.

Optional Supportive Courses

Title	Code	Credit	Special Considerations
Business Communications	12009	0.5	
Entrepreneurship	12053	0.5	
Business Law	12054	0.5	
Business Economics	12105	0.5	
Applied Business Technology Applications	33110	1	Before enrolling, students must complete a computer skills course like Computer Applications (60004/10004).

APPLICATION LEVEL

At least **ONE** ***credit*** *from at least* ***one strand*** *is* ***required. Either Financial Institutions and Services Strand or Accounting Strand.***

Financial Institutions and Services Strand

Title	Code	Credit	Special Considerations
Banking & Finance	12101	0.5	
Risk Management & Insurance	12106	0.5	
Investing	12107	0.5	

Accounting Strand

Title	Code	Credit	Special Considerations
Advanced Accounting	33108	1	Prerequisite course required; see competency profile.
College Accounting	33109	1	

APPROVED PATHWAY:

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

Business Finance Pathway CIP CODE 52.0801

Optional Supportive Courses

Title	Code	Credit	Special Considerations
Business Finance Work Based Learning	12148	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Business Finance Work Based Learning	33200	1	Prerequisite course required; see competency profile.

MARKETING AND SALES CAREER CLUSTER DESIGN
Marketing Pathway

CIP CODE 52.1402

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Business Essentials	12050	0.5	Required course for pathway approval. Business Essentials (12050) can integrate with Computer Applications (10004).
AP Intro to Business	12051	0.5	Districts may map both 12050 and 120S1; however, students may only take either 12050 or 12051 for credit.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Business Communications	12009	0.5	Course not required for approval but strongly recommended by review committee and KACCTE.
Sports/Entertainment Marketing	12163	0.5	
Principles of Marketing	12164	1	Required course for pathway approval.
Digital Marketing & Advertising	35162	0.5	

Optional Supportive Courses

Title	Code	Credit	Special Considerations
Web Design	10201	1	
2D Animation	10202	1	
Business Management	12052	0.5	
Entrepreneurship	12053	0.5	
IB Business & Management	12059	1	
Accounting	12104	1	
Business Economics	12105	0.5	
Foundations of Travel & Tourism	16151	0.5	
Graphic Design I	30102	0.5	
Audio/Visual Production I	30103	0.5	
Applied Business Technology Applications	33110	1	Before enrolling, students must complete a computer skills course like Computer Applications (60004/10004).
Event Planning & Management	34052	0.5	

APPROVED PATHWAY:

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

Marketing Pathway 52.1402

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Marketing Applications	35300	1	Required course for pathway approval.

Optional Supportive Courses

Title	Code	Credit	Special Considerations
Marketing Management	12166	1	
Marketing Work Based Learning	12198	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Marketing Work Based Learning	12199	1	Prerequisite course required; see competency profile.
Marketing Communications	35168	0.5	
Marketing Research	12196	1	

HOSPITALITY, EVENTS AND TOURISM CAREER CLUSTER DESIGN

Restaurant and Event Management Pathway

CIP CODE 12.0504

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Business Essentials	12050	0.5	Business Essentials (12050) can integrate with Computer Applications (10004).
Introduction to Family & Consumer Sciences	19251	0.5	
Career & Life Planning	19258	0.5	

TECHNICAL LEVEL

Select a strand at division.

Title	Code	Credit	Special Considerations
Culinary Essentials	16052	0.5	Required course for pathway approval.
Nutrition & Dietetics	19253	0.5	

Event Planning and Management Strand

Title	Code	Credit	Special Considerations
Foundations of Travel & Tourism	16151	0.5	
Event Planning & Management	34052	0.5	Required course for this strand.

Culinary Arts and Management Strand

Title	Code	Credit	Special Considerations
Culinary Arts I	16053	1	Required course for this strand.
Culinary Arts II	16055	0.5	Prerequisite course required; see competency profile.
Baking & Pastry I	16056	0.5	
Baking & Pastry II	16057	0.5	Prerequisite course required; see competency profile.
Food Science	19254	1	
Event Planning & Management	34052	0.5	

Additional Courses

*These courses may be offered after **THREE** credits in the technical level have been selected.*

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	
Principles of Marketing	12164	1	

APPROVED PATHWAY:

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

Restaurant and Event Management Pathway 12.0504

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Restaurant and Event Management Work Based Learning	16098	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Restaurant and Event Management Work Based Learning	16108	1	Prerequisite course required; see competency profile.
Community Connections	19297	0.5	
Applied Business Development	32200	1	

Travel and Tourism Pathway

CIP CODE 52.0901

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Business Essentials	12050	0.5	Business Essentials (12050) can integrate with Computer Applications (10004).
Introduction to Family & Consumer Sciences	19251	0.5	
Career & Life Planning	19258	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	
Principles of Marketing	12164	1	
Culinary Essentials	16052	0.5	
Foundations of Hospitality & Lodging	16101	0.5	
Foundations of Travel & Tourism	16151	0.5	
Nutrition & Dietetics	19253	0.5	
Event Planning & Management	34052	0.5	Required course for pathway approval.

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Travel and Tourism Work Based Learning	16148	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Travel and Tourism Work Based Learning	16998	1	Prerequisite course required; see competency profile.
Community Connections	19297	0.5	

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DESIGN, PRODUCTION & REPAIR



ADVANCED MANUFACTURING CAREER CLUSTER DESIGN
Automation Engineering and Industrial Machine Maintenance Technology

CIP CODE 15.0406

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Manufacturing	13001	0.5	
Production Print Reading I	21108	0.5	
Introduction to Computer Coding	31001	0.5	
Introduction to Physical Computing	31002	0.5	
Introduction to Skilled Trades	38001	0.5	
Introduction to Engineering	41310	1	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Cybersecurity I	10020	1	
Computer Programming	10152	1	
Mechanical Drive Systems	13302	0.5	
Fundamentals of Electrical Theory	17101	1	
Engineering Design	21006	1	Offer either 21006 or 21107, but not both.
Robotics I	21009	1	
Drafting/CAD	21107	1	Offer either 21006 or 21107, but not both.
Foundations of Electronics	21201	1	
Welding Processes I	39207	1	
Hand & Power Tools	40400	0.5	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPROVED PATHWAY:

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

Automation Engineering and Industrial Machine Maintenance Technology CIP CODE 15.0406

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Industrial Maintenance Systems	13303	0.5	Prerequisite course required; see competency profile.
Digital Electronics	21008	1	
Computer Integrated Manufacturing	21010	1	
AET/IMMT Work Based Learning	21068	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Robotics II	39009	0.5	Prerequisite course required; see competency profile.
Automated Integrated Systems I	39010	0.5	
Automated Integrated Systems II	39020	0.5	Prerequisite course required; see competency profile.
Fluid Power	39302	0.5	
Advanced AET/IMMT Work Based Learning	41068	1	Prerequisite course required; see competency profile.
Materials Science in Engineering	41355	0.5	

Aviation Production Pathway

CIP CODE 15.0801

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Manufacturing	13001	0.5	
Production Print Reading I	21108	0.5	
Introduction to Skilled Trades	38001	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Hand & Power Tools	40400	0.5	Required course for pathway approval.
Aviation Fundamentals	40410	0.5	Required course for pathway approval.
Aircraft Systems	40420	1	

Design Strand

Title	Code	Credit	Special Considerations
Drafting/CAD	21107	1	

Production Strand

Title	Code	Credit	Special Considerations
Production Methods I	13052	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPROVED PATHWAY:

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

Aviation Production Pathway CIP CODE 15.0801

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Aviation Production Work Based Learning	21078	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Aviation Production Work Based Learning	41078	1	Prerequisite course required; see competency profile.

Design Strand

Title	Code	Credit	Special Considerations
Aerospace Engineering	21013	1	
Aerospace Drawings I	41500	0.5	Prerequisite course required; see competency profile.
Aerospace Drawings II	41510	0.5	Prerequisite course required; see competency profile.
Special Projects & Research in Aviation	41520	1	Prerequisite course required; see competency profile.

Production Strand

Title	Code	Credit	Special Considerations
Aviation Tooling	40600	1	
Aerostructures	40620	1	
Composites	40640	1	

Engineering and Design Pathway

CIP CODE 14.4101

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Production Print Reading I	21108	0.5	
Introduction to Engineering	41310	1	Required course for pathway approval.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Engineering Design	21006	1	Offer either 21006 or 21107, but not both.
Robotics I	21009	1	
Drafting/CAD	21107	1	Offer either 21006 or 21107, but not both.
Foundations of Electronics	21201	1	
Principles of Applied Engineering	41320	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Engineering Design Capstone	21007	1	Prerequisite course required; see competency profile.
Digital Electronics	21008	1	
Computer Integrated Manufacturing	21010	1	
Civil Engineering & Architecture	21012	1	
Aerospace Engineering	21013	1	
Engineering Systems	21016	1	Prerequisite course required; see competency profile.
Advanced Engineering Work Based Learning	21048	1	Prerequisite course required; see competency profile.
Advanced Drafting/CAD	21150	1	Prerequisite course required; see competency profile
Advanced Electronics	21202	1	Prerequisite course required; see competency profile.
Engineering Work Based Learning	41048	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Project Management	41350	0.5	
Materials Science in Engineering	41355	0.5	

APPROVED PATHWAY:

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

Manufacturing Pathway

CIP CODE 48.0503

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Manufacturing	13001	0.5	
Introduction to Welding	13207	0.5	
Production Print Reading I	21108	0.5	
Introduction to Skilled Trades	38001	0.5	

TECHNICAL LEVEL

Optional Supportive Courses

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	
Production Methods I	13052	1	
Robotics I	21009	1	
Drafting/CAD	21107	1	
Production Print Reading II	39108	0.5	Prerequisite course required; see competency profile.
Hand & Power Tools	40400	0.5	

Welding Production Strand

Title	Code	Credit	Special Considerations
Agricultural Welding I	18404	1	Choose 18404 or 39207, not both.
Cutting Processes	39206	0.5	
Welding Processes I	39207	1	Choose 18404 or 39207, not both.

Machine Tool Technology Strand

Title	Code	Credit	Special Considerations
Machine Tool Technology	13203	1	
Computer-Aided Machining (CAM) I	13204	1	

APPLICATION LEVEL

Optional Supportive Courses

Title	Code	Credit	Special Considerations
Manufacturing Work Based Learning	13348	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Manufacturing Work Based Learning	13998	1	Prerequisite course required; see competency profile.
Production Methods II	39052	1	Prerequisite course required; see competency profile.
Advanced Materials & Fabrication	38010	1	Prerequisite course required; see competency profile.

APPROVED PATHWAY:

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

Manufacturing Pathway 48.0503

Welding Production Strand

Title	Code	Credit	Special Considerations
Agricultural Welding II	18407	1	Choose 18407 or 39208, not both. Prerequisite course required; see competency profile.
Welding Processes II	39208	1	Choose 18407 or 39208, not both. Prerequisite course required; see competency profile.
Shielded Metal Arc Welding (SMAW) I	39209	0.5	Prerequisite: Welding Processes I or Cutting Processes.
Shielded Metal Arc Welding (SMAW) II	39210	0.5	Prerequisite: SMAW I
Gas Metal Arc Welding (GMAW) I	39211	0.5	Prerequisite: Welding Processes I or Cutting Processes.
Gas Metal Arc Welding (GMAW) II	39212	0.5	Prerequisite: GMAW I
Gas Tungsten Arc Welding (GTAW) I	39213	0.5	Prerequisite: Welding Processes I or Cutting Processes.
Gas Tungsten Arc Welding (GTAW) II	39214	0.5	Prerequisite: GTAW I

Machine Tool Technology Strand

Title	Code	Credit	Special Considerations
Machine Tool Technology II	13213	1	Prerequisite course required; see competency profile.
Computer Integrated Manufacturing	21010	1	
Computer Aided Machining (CAM) II	39205	0.5	Prerequisite course required; see competency profile.

CONSTRUCTION CAREER CLUSTER DESIGN

Construction and Design Pathway

CIP CODE 46.0000

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Drafting/Print Reading	21102	0.5	
Production Print Reading I	21108	0.5	
Introduction to Skilled Trades	38001	0.5	Required course for construction strand.

TECHNICAL LEVEL

Design Strand

Title	Code	Credit	Special Considerations
Interior Design I	19263	0.5	Requires FCS License.
Drafting/Architecture I	21103	1	
Drafting/CAD	21107	1	
Architectural Design I	21203	0.5	
Interior Design II	22212	0.5	Requires FCS License. Prerequisite course required; see competency profile.

Construction Strand

Title	Code	Credit	Special Considerations
General Carpentry I	17002	1	
Woodworking Principles	17007	1	
Mechanical/Electrical/Plumbing (MEP) I	17062	0.5	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPROVED PATHWAY:

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

Construction and Design Pathway 46.0000

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Construction and Design Work Based Learning	38100	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Construction and Design Work Based Learning	38110	1	Prerequisite course required; see competency profile.

Design Strand

Title	Code	Credit	Special Considerations
Research & Design for Preconstruction	21109	1	
Drafting/Architecture II	38050	0.5	Prerequisite course required; see competency profile.
Interior Architectural Design	38212	0.5	
Architectural Design II	38223	0.5	Prerequisite course required; see competency profile.

Construction Strand

Title	Code	Credit	Special Considerations
Sheet Metal Technology	13205	1	Prerequisite course required; see competency profile.
Research & Design in Building Trades	17005	1	Prerequisite course required; see competency profile.
Remodel & Building Maintenance	17009	0.5	Prerequisite course required; see competency profile.
HVAC Technology	17056	0.5	Prerequisite course required; see competency profile.
Plumbing Technology	17058	0.5	Prerequisite course required; see competency profile.
Electrical Technology	17113	0.5	Prerequisite course required; see competency profile.
General Carpentry II	38002	1	Prerequisite course required; see competency profile.
Advanced Materials & Fabrication	38010	1	Prerequisite course required; see competency profile.

SUPPLY CHAIN AND TRANSPORTATION CAREER CLUSTER DESIGN

Aviation Maintenance and Operations Pathway

CIP CODE 47.0607

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Production Print Reading I	21108	0.5	
Introduction to Skilled Trades	38001	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Foundations of Electronics	21201	1	
Hand & Power Tools	40400	0.5	
Aviation Fundamentals	40410	0.5	
Aircraft Systems	40420	1	
Aviation Maintenance Technician (AMT) General I	40431	0.5	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Small Uncrewed Aircraft Systems (sUAS) I	40490	1	Prerequisite course required; see competency profile.
Aviation Maintenance and Operations Work Based Learning	40700	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Aviation Maintenance and Operations Work Based Learning	40701	1	Prerequisite course required; see competency profile.
Digital Electronics	21008	1	
AC Electronics	40450	1	
DC Electronics	40460	1	
Aviation Maintenance Technician (AMT) General II	40432	0.5	Prerequisite course required; see competency profile.
Aviation Maintenance Technician (AMT) General III	40433	0.5	Prerequisite course required; see competency profile.
Aviation Maintenance Technician (AMT) General IV	40434	0.5	Prerequisite course required; see competency profile.
Private Pilot Ground School	40540	1	Prerequisite course required; see competency profile.

APPROVED PATHWAY:

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

Logistics and Supply Chain Management Pathway

CIP CODE 52.0203

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Business Essentials	12050	0.5	Required course for pathway approval. Business Essentials (12050) can integrate with Computer Applications (10004).
AP Intro to Business	12051	0.5	Districts may map both 12050 and 120S1; however, students may only take either 12050 or 12051 for credit.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Supply Chain Management	20151	1	Required course for pathway approval.
Business Management	12052	0.5	Required course for pathway approval.
Business Communication	12009	0.5	
Entrepreneurship	12053	0.5	
Accounting	12104	1	
Business Law	12054	0.5	
Logistics I	20152	1	
Hazardous Materials for the First Responder	44070	1	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Logistics II	20153	0.5	Prerequisite: Logistics I
CDL - Entry Level Driver Training	40240	0.5	
Logistics & Supply Chain Work-Based Learning Management	20197	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Logistics & Supply Chain Work-Based Learning Management	20198	1	Prerequisite course required; see competency profile.

APPROVED PATHWAY:

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

Vehicle Maintenance and Repair Pathway

CIP CODE 47.0600

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Business Essentials	12050	0.5	Business Essentials (12050) can integrate with Computer Applications (10004).
Introduction to Skilled Trades	38001	0.5	Must choose either 38001 or 40050 for pathway approval.
Basic Automotive Care & Information	40050	0.5	Must choose either 38001 or 40050 for pathway approval.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
General Service I	40150	1	
Electronics & Electrical Systems I	40200	1	
Brakes I	40204	0.5	
Drive Train Technology I	40208	0.5	
Diesel & Heavy Equipment Technology I	40218	1	
Engine Performance I	40220	0.5	
Steering & Suspension I	40224	0.5	
Mobile HVAC	40228	0.5	
Auto Collision I	40300	1	
Auto Refinishing I	40310	1	

Optional Supportive Courses

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	
Alternative Power	40210	0.5	
Small Engine & Powertrains I	40212	0.5	
Engine Mechanical Repair	40216	0.5	

Vehicle Maintenance and Repair Pathway 47.0600

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
General Service II	40152	1	Prerequisite course required; see competency profile.
General Service III	40154	1	Prerequisite course required; see competency profile.
Electronics & Electrical Systems II	40202	1	Prerequisite course required; see competency profile.
Brakes II	40206	0.5	Prerequisite course required; see competency profile.
Engine Performance II	40222	1	Prerequisite course required; see competency profile.
Steering & Suspension II	40226	0.5	Prerequisite course required; see competency profile.
Diesel & Heavy Equipment Technology II	40238	1	Prerequisite course required; see competency profile.
Diesel & Heavy Equipment Technology III	40239	1	Prerequisite course required; see competency profile.
CDL - Entry Level Driver Training	40240	0.5	Prerequisite course required; see competency profile.
Vehicle Maintenance & Repair Work Based Learning	40250	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Vehicle Maintenance & Repair Work Based Learning	40251	1	Prerequisite course required; see competency profile.
Auto Collision II	40302	1	Prerequisite course required; see competency profile.
Auto Refinishing II	40312	1	Prerequisite course required; see competency profile.

Optional Supportive Course

Title	Code	Credit	Special Considerations
Small Engines & Powertrains II	40214	0.5	Prerequisite course required; see competency profile.

HEALTH & HUMAN SERVICES



HEALTHCARE AND HUMAN SERVICES CAREER CLUSTER DESIGN

Biotechnology Pathway

CIP CODE 26.1201

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Chemistry	03101	1	
Computing Systems (Grade 8/9)	60002/10002	1	
Computer Applications (Grade 8/9)	60004/10004	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Anatomy & Physiology	03053	1	03053 or 21014 required for pathway approval.
Human Body Systems	14102	1	
Pharmacology	14253	1	
Biotechnology Essentials	21014	1	03053 or 21014 required for pathway approval.

Biochemistry Strand

Title	Code	Credit	Special Considerations
Applied Biochemistry	03203	1	
Plant & Soil Science	18058	1	
Food Science	19254	1	

Biomedical Strand

Title	Code	Credit	Special Considerations
Medical Interventions	14105	1	
Principles of Biomedical Science	14251	1	
Robotics I	21009	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPROVED PATHWAY:

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

Biotechnology Pathway 26.1201

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Biotechnology Work Based Learning	14998	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Applied Biotechnology	18320	1	
Advanced Biotechnology Work Based Learning	14298	1	Prerequisite course required; see competency profile.

Biochemistry Strand

Title	Code	Credit	Special Considerations
Particular Topics in Engineering	21015	1	

Biomedical Strand

Title	Code	Credit	Special Considerations
Biomedical Innovation	14255	1	
Emerging Technologies	21053	1	

Family, Community and Consumer Services Pathway

CIP CODE 44.0000

INTRODUCTORY LEVEL

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

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Family Studies	19255	0.5	Required course for pathway approval.

Comprehensive Family and Consumer Sciences

Title	Code	Credit	Special Considerations
Human Growth and Development – Early Years	45004	0.5	45004 or 45014 required for strand approval.
Lifespan Development	45014	0.5	45004 or 45014 required for strand approval.
Leadership Service in Action	19257	0.5	
Dimensions of Wellness	19250	0.5	

Nutritional Services Strand

Title	Code	Credit	Special Considerations
Nutrition and Dietetics	19253	0.5	
Culinary Essentials	16052	0.5	

Mental and Behavioral Health Strand

Title	Code	Credit	Special Considerations
Foundations of Mental and Behavior Health	19260	0.5	Required course for strand approval.
Dimensions of Wellness	19250	0.5	19250 or 45014 required for strand approval.
Lifespan Development	45014	0.5	19250 or 45014 required for strand approval.

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	
Family, Community and Consumer Services (Human Services) Work Based Learning	19296	0.5/1	Schools can choose credit options of 0.5 or 1 credit. Requires one credit in human services courses.
Advanced Family, Community and Consumer Services (Human Services) Work Based Learning	19299	1	Requires one credit in human services courses. Prerequisite course required; see competency profile.

APPROVED PATHWAY:

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

Health Science Pathway

CIP CODE 51.3901

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Chemistry	03101	1	
Introduction to Health Care	14000	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Anatomy & Physiology	03053	1	Required course for pathway approval.
Fundamentals of Emergency Services	14055	0.5	
Human Body Systems	14102	1	
Medical Interventions	14105	1	
Medical Terminology	14154	0.5	
Health Care Essentials I	14254	0.5	
Nutrition & Dietetics	19253	0.5	
Health Care Essentials II	36254	1	
EMS First Responder	44050	0.5	Course may need specific teacher certification and/or offer professional certification.

Sports Med/Rehabilitation Strand

Title	Code	Credit	Special Considerations
Foundations of Rehab	14060	0.5	Course may need specific teacher certification and/or offer professional certification.
Care of Athletes	14062	0.5	Course may need specific teacher certification and/or offer professional certification.
Sports Medicine I	14072	1	Course may need specific teacher certification and/or offer professional certification.

Allied Health Strand

Title	Code	Credit	Special Considerations
Medical Imaging	14103	0.5	
Principles of Phlebotomy	14104	0.5	Course may need specific teacher certification and/or offer professional certification.
Pharmacology	14253	1	Course may need specific teacher certification and/or offer professional certification.

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPROVED PATHWAY:

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

Health Science Pathway 51.3901

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Certified Patient Care Technician	14202	0.5	Course may need specific teacher certification and/or offer professional certification.
Certified Nursing Assistant	14997	0.5	Course may need specific teacher certification and/or offer professional certification.
Certified Medication Aide	36156	0.5	Course may need specific teacher certification and/or offer professional certification.
Health Science Work Based Learning	36992	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Health Science Work Based Learning	36993	2	Prerequisite course required; see competency profile.

Sports Med/Rehabilitation Strand

Title	Code	Credit	Special Considerations
Sports Medicine II	14073	1	Prerequisite course required; see competency profile. Course may need specific teacher certification and/or offer professional certification.

Allied Health Strand

Title	Code	Credit	Special Considerations
Home Health Aide	36053	0.5	Course may need specific teacher certification and/or offer professional certification.
Principles of Pharmacy	36157	1	Course may need specific teacher certification and/or offer professional certification.
EKG Technician	36991	0.5	Course may need specific teacher certification and/or offer professional certification.
EMT I	44060	1	Course may need specific teacher certification and/or offer professional certification.
EMT II	44065	1	Prerequisite course required; see competency profile. Course may need specific teacher certification and/or offer professional certification.

MEDIA & TECHNOLOGY



DIGITAL TECHNOLOGY CAREER CLUSTER DESIGN
Information Support and Services Pathway

CIP CODE 11.1006

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Computing Systems (Grade 8/9)	60002/10002	1	
Computer Applications (Grade 8/9)	60004/10004	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Foundations of Information Technology	10001	1	Required course for pathway approval.
Information Support & Services I	10052	1	
AP Cybersecurity	10024	1	Recommend 10024 or 10020
Cybersecurity I	10020	1	Recommend 10024 or 10020
Web Design	10201	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Information Support & Services II	10097	1	Prerequisite course required; see competency profile.
Information Support & Services Work-based Learning	10098	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Cybersecurity II	10900	1	Prerequisite course required; see competency profile.
Advanced Information Support & Services Work-based Learning	30098	1	Prerequisite course required; see competency profile.

APPROVED PATHWAY:

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

Media Design and Communications Pathway

CIP CODE 11.0801

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Web & Digital Media	05254	0.5	
Computer Applications (Grade 8/9)	60004/10004	0.5	
Drawing for Designers	30006	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Graphic Design II	05162	1	
Computer Programming	10152	1	
Web Design	10201	1	
Interactive Media	10203	1	
Principles of Illustration	30101	0.5	
Graphic Design I	30102	0.5	

OPTIONAL TECHNICAL LEVEL SUPPORTIVE COURSES

Content Creation

Title	Code	Credit	Special Considerations
2D Animation	10202	1	
3D Animation	10210	1	
Journalism & Media Communications	30100	0.5	
Audio/Video Production I	30103	0.5	
Digital Media Technology	30104	0.5	
Photo Imaging I	30105	0.5	
Media & Public Relations	43115	0.5	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPROVED PATHWAY:

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

Media Design and Communications Pathway 11.0801

APPLICATION LEVEL

Graphic Design Strand

Title	Code	Credit	Special Considerations
Media Design & Communications - Graphic Design Work-based Learning	10248	0.5/1	Schools can choose credit options of 0.5 or 1 credit. Students may only take 10248 or 31096 for pathway credit.
Applied Graphic Design	31090	1	

Web And Digital Design Strand

Title	Code	Credit	Special Considerations
Applied Game Design	10165	1	
Media Design & Communications - Web & Digital Work Based Learning	31096	0.5/1	Students may only take 10248 or 31096 for pathway credit Schools can choose credit options of 0.5 or 1 credit.

OPTIONAL APPLICATION LEVEL SUPPORTIVE COURSES

Content Creation

Title	Code	Credit	Special Considerations
Audio/Video Production II	30150	1	Prerequisite course required; see competency profile.
Media Design & Production	30151	1	
Advanced Media Design & Production	31091	1	Prerequisite course required; see competency profile.
Photo Imaging II	30115	1	
Advanced Media Design and Communications Work-based Learning	30248	1	Prerequisite course required; see competency profile.

Networking and Telecommunications Pathway

CIP CODE 11.0901

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Computing Systems (Grade 8/9)	60002/10002	1	
Computer Applications (Grade 8/9)	60004/10004	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Foundations of Information Technology	10001	1	Required course for pathway approval.
Telecommunications	10106	1	
Digital Electronics	21008	1	
GIS Technology	21058	1	
Fundamentals of Electricity & Electronics	41170	1	
Network Systems I	10112	1	Recommended 10112 or 10023
AP Networking	10023	1	Recommended 10112 or 10023
AP Cybersecurity	10024	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Network Systems II	10147	1	Prerequisite course required; see competency profile.
Networking and Telecommunications Work Based Learning	11048	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Applied Telecommunications	11049	1	
Advanced Networking and Telecommunications Work Based Learning	31048	1	Prerequisite course required; see competency profile.
GIS Spatial Applications	21112	1	

APPROVED PATHWAY:

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

Programming and Software Development Pathway

CIP CODE 11.0201

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Computing Systems (Grade 8/9)	60002/10002	1	
Introduction to Computer Coding	31001	0.5	
Introduction to Web & Digital Media	05254	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Database Applications	10053	1	
Computer Programming	10152	1	
Web Design	10201	1	
AP Computer Science Principles	31094	1	
Foundations of Computer Science	41010	1	
AP Cybersecurity	10024	1	Recommend 10024 or 10020
Cybersecurity I	10020	1	Recommend 10024 or 10020
Foundations of Artificial Intelligence	10170	0.5	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
AP Computer Science A	10157	1	
IB Computing	10159	1	
Computer Science Capstone	10160	1	
Programming and Software Development Work-based Learning	10198	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Applied Game Design	10165	1	
Advanced Programming and Software Development Work Based Learning	30198	1	Prerequisite course required; see competency profile.

APPROVED PATHWAY:

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

PUBLIC SERVICES



EDUCATION CAREER CLUSTER DESIGN
Early Childhood Development and Services Pathway

CIP CODE 19.0709

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Education	19199	0.5	
Introduction to Family & Consumer Sciences	19251	0.5	
Career & Life Planning	19258	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Leadership Service in Action	19257	0.5	
Teaching Observation	42251	0.5	

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

Early Childhood Education Strand

Title	Code	Credit	Special Considerations
Orientation to Early Childhood Development	19051	1	
Foundations of Early Childhood Development	19052	1	

Early Childhood Related Services Strand

Title	Code	Credit	Special Considerations
Foundations of Early Childhood Development	19052	1	
Family Studies	19255	0.5	
Human Growth & Development – Early Years	45004	0.5	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Early Childhood Development and Services Work Based Learning	19301	0.5/1	Has a prerequisite of one credit in Early Childhood Development and Services Pathway (1 credit Technical or Application -Level course). Schools can choose credit options of 0.5 or 1 credit.
Advanced Early Childhood Development and Services Work Based Learning	19302	1	Has a prerequisite of one credit in Early Childhood Development and Services Pathway (1 credit Technical or Application -Level course)

APPROVED PATHWAY:

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

Teaching/Training

CIP CODE 13.0101

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Education	19199	0.5	
Introduction to Family & Consumer Sciences	19251	0.5	
Career & Life Planning	19258	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Teaching as a Career	19151	1	Required course for pathway approval.
Coaching & Leadership	19154	0.5	
Technology for Teachers	19155	0.5	
Family Studies	19255	0.5	Alternate course Orientation to Early Childhood Development (19051)
Teaching Observation	42251	0.5	
Human Growth & Development – Early Years	45004	0.5	Alternate course Orientation to Early Childhood Development (19051). Must choose ONE of these courses at the technical level for pathway approval
Lifespan Development	45014	0.5	Alternate course Orientation to Early Childhood Development (19051). Must choose ONE of these courses at the technical level for pathway approval

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Teaching/Training Work Based Learning	19152	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Educational Leadership	19198	0.5	
Advanced Teaching/Training Work Based Learning	19158	1	Prerequisite course required; see competency profile.

PUBLIC SERVICE AND SAFETY CAREER CLUSTER DESIGN
Government and Public Administration Pathway

CIP CODE 44.0401

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Career & Life Planning	19258	0.5	
Introduction to Government & Public Administration	43001	0.5	Required course for pathway approval.

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Government & Public Administration Fundamentals	43105	0.5	Required course for pathway approval.
IT for Service Professions	44010	0.5	
Lifespan Development	45014	0.5	

Public Administration Strand

Title	Code	Credit	Special Considerations
Business Management	12052	0.5	
Business Law	12054	0.5	Required course for pathway approval per strand.
Accounting	12104	1	
Business Economics	12105	0.5	

Pre-Law Legal Assistance Strand

Title	Code	Credit	Special Considerations
Government & Public Media Relations	04990	0.5	
Business Law	12054	0.5	Required course for pathway approval per strand.
Business Economics	12105	0.5	
Practical Law	44300	0.5	Required course for pathway approval per strand.

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPROVED PATHWAY:

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

Government and Public Administration Pathway CIP CODE 44.0401

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Government & Public Administration Work Based Learning	43253	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Government & Public Administration Work Based Learning	43260	1	Prerequisite course required; see competency profile.
Foundations in Law	44305	1	
Legal Proceedings	44310	1	

Corrections, Security, Law and Law Enforcement Services Pathway

CIP CODE 43.0199

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Law, Public Safety, Corrections & Security (LPSCS)	44001	0.5	Required course for pathway approval.

TECHNICAL LEVEL

Pre-Law Strand

Title	Code	Credit	Special Considerations
Business Communications	12009	0.5	
Business Management	12052	0.5	
Business Law	12054	0.5	Required course for pathway approval.
Accounting	12104	1	
Business Economics	12105	0.5	
Practical Law	44300	0.5	Required course for pathway approval.

Law Enforcement Strand

Title	Code	Credit	Special Considerations
EMS First Responder	44050	0.5	Course may need specific teacher certification and/or offer professional certification.
Hazardous Materials for the First Responder	44070	0.5	
Law Enforcement I	44200	1	
Forensic Science I	44225	1	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPROVED PATHWAY:

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

Corrections, Security, Law and Law Enforcement Services Pathway CIP CODE 43.0199

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Corrections, Security, Law & Law Enforcement Services Work Based Learning	44298	0.5/1	Prerequisite course required; see competency profile. Schools can choose credit options of 0.5 or 1 credit.
Advanced Corrections, Security, Law & Law Enforcement Services Work Based Learning	44350	1	Prerequisite course required; see competency profile.

Pre-Law Strand

Title	Code	Credit	Special Considerations
Foundations in Law	44305	1	
Legal Proceedings	44310	1	

Law Enforcement Strand

Title	Code	Credit	Special Considerations
Law Enforcement II	44201	1	Prerequisite course required; see competency profile.
Certified Protection Officer	44210	0.5	
Corrections Officer	44215	0.5	
Forensic Science II	44226	1	Prerequisite course required; see competency profile.

Emergency and Fire Management Services Pathway

CIP CODE 43.0299

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Law, Public Safety, Corrections & Security (LPSCS)	44001	0.5	Required course for pathway approval.
Introduction to Emergency Medical Services (EMS)	44005	0.5	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Medical Terminology	14154	0.5	
EMS First Responder	44050	0.5	Course may need specific teacher certification and/or offer professional certification.
Hazardous Materials for the First Responder	44070	0.5	
Fire Service Special Operations	44080	0.5	

Optional Supportive Course

Title	Code	Credit	Special Considerations
Entrepreneurship	12053	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Emergency Medical Technician (EMT) I	44060	1	Course may need specific teacher certification and/or offer professional certification.
EMT II	44065	1	Course may need specific teacher certification and/or offer professional certification. Prerequisite course required; see competency profile
Fire Science I	44100	1	Course may need specific teacher certification and/or offer professional certification.
Fire Science II	44101	1	Course may need specific teacher certification and/or offer professional certification. Prerequisite course required; see competency profile
Emergency & Fire Services Work Based Learning	44250	0.5/1	Schools can choose credit options of 0.5 or 1 credit.
Advanced Emergency & Fire Services Work Based Learning	44252	1	Prerequisite course required; see competency profile.

APPROVED PATHWAY:

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

Kansas CTE 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: This is an advanced level course that builds on the technical level course and includes opportunities for the learner to demonstrate knowledge attained through practical application of skills. It should include work-based learning experiences such as an internship, health science clinical, supervised agricultural experience (SAE), work simulation or school-based endeavor (store, etc.).

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

ARTICULATION AGREEMENT: A written commitment 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; a program 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): The term "career and technical education" means organized educational activities that:

(A) offer a sequence of courses that -

  (i) provides 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, which shall be, at the secondary level, aligned with the challenging State academic standards adopted by a State under section 6311 (b)(1) of this title;

  (ii) provides technical skill proficiency or a recognized postsecondary credential, which may include an industry-recognized credential, a certificate, or an associate degree; and

  (iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph;

(B) 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;

(C) to the extent practicable, coordinate between secondary and postsecondary education programs through programs of study, which may include coordination through articulation agreements, early college high school programs, dual or concurrent enrollment program opportunities, or other credit transfer agreements that provide postsecondary credit or advanced standing; and

(D) may include career exploration at the high school level or as early as the middle grades (as such term is defined in section 7801 of this title). 20 USC Ch. 44: CAREER AND TECHNICAL EDUCATION[1]

1 *20 USC Ch. 44: CAREER AND TECHNICAL EDUCATION*. (n.d.). https://uscode.house.gov/view.xhtml?path=/prelim@title20/chapter44&edition=prelim

KANSAS CTE TERMINOLOGY

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 (IPS).

CAREER AND TECHNICAL EDUCATION (CTE) SEQUENCE OF COURSES: These courses 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. They provide technical skill proficiency, an industry-recognized credential, a certificate, or a postsecondary degree, and 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): These are 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 21st century skills in authentic, real-world applications.

CAREER CLUSTER(S): These are divisions of the six Kansas industries (Industry Sectors) that include occupations organized around knowledge and skills that have common characteristics and job duties. Kansas identifies the following 13 broad clusters:

1. Advanced Manufacturing
2. Agriculture
3. Construction
4. Digital Technology
5. Education
6. Energy and Natural Resources
7. Financial Services
8. Healthcare and Human Services
9. Hospitality, Events and Tourism
10. Management and Entrepreneurship
11. Marketing and Sales
12. Public Service and Safety
13. Supply Chain and Transportation

EMPLOYABILITY SKILLS: These are foundational skills 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 U.S. Department of Education's employability skills framework as a model of employability skills.

COMPLETER: This is 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 postsecondary 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.gov).[2]

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 CONCENTRATOR: The term "CTE concentrator" means-

(A) at the secondary school level, a student who has completed at least two (2) courses (equivalent to two (2) or more secondary level credits) in a single career and technical education pathway.

CTE PARTICIPANT: The term "CTE participant" means an individual who completes not less than one course (equivalent to a student who has earned one, but less than two secondary level credits) in a single career and technical education pathway.

CTE SCHOLAR: See Kansas CTE Scholar.

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

HIGH-DEMAND OCCUPATION: This is an occupation that has the following:

1. 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.

Kansas Department of Labor's Labor Market Information Services (LMIS) has created labor market information (LMI) organized by cluster and pathway. The LMI includes high-demand information.

HIGH-SKILL OCCUPATION: This is an occupation that requires all 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 or problem-solving);
3. A recognized validation of skill attainment or credential (examples: certification, registration or licensure); and
4. Mandatory continuing education and/or training.

HIGH-WAGE OCCUPATION: Kansas Department of Labor's Labor Market Information Services (LMIS) has created labor market information (LMI) organized by cluster and pathway. The LMI includes high-wage information.

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2 KSDE. (2021). *https://www.ksde.gov/docs/default-source/csas/kansas-work-based-learning_personalized-learning-plan-(updated-2-2021).pdf*

KANSAS CTE TERMINOLOGY

INDIVIDUAL PLAN OF STUDY (IPS): This is a personalized plan developed beginning in middle school based on a student's career interests. It serves as both a product created by the student and a process supported by the school, developed collaboratively among the student, school staff and family members.

An IPS includes the following components:

- A series of strength assessments and career interest inventories to help identify career cluster preferences.
- A grade 8–12 course plan aligned to career interests.
- A general postsecondary plan (workforce, military, certification program, or two- or four-year college).
- A portable electronic portfolio.

INTERNSHIP: This is 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).

INTRODUCTORY LEVEL COURSE: These are 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 PATHWAY(S): These are 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 32 state-approved pathways identified within the 13 clusters.

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

KANSAS CTE SCHOLAR: This is an outstanding career and technical education student in their senior year who has met criteria to indicate their well-rounded development.

KANSAS INDUSTRIES: There are six industries displayed on the elementary school level graphic. They are recognized as Agriculture; Business; Design, Production, and Repair; Health and Human Services; Media and Technology; and Public Services.

PROFICIENCY CREDIT: This is 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): This is a 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: This is 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.

KANSAS CTE TERMINOLOGY

21st CENTURY SKILLS: These are skills essential for workplace/career success including the following: 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 21st Century content which is: global awareness, financial, economic, business, and entrepreneurial literacy, civic literacy, health and wellness awareness, and environmental literacy.

UNIT OF CREDIT: This is 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 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.)

WORK-BASED LEARNING: This experience is 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 and may provide instruction in all aspects of the industry. These experiences are most commonly in application-level courses.

KANSAS CTE TERMINOLOGY

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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. Review of labor market data, student interest and participation.

- CTE Course Competencies and Indicators[1]

ADVISORY COMMITEE INFORMATION

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[1].

1 https://KSDE.gov/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.

Alphabetical by Course Title

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0301	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
2D Animation	10202										X															X							
3D Animation	10210																									X							
AC Electronics	40450																		X														
Accounting	12104								X	X	X									X											X		X
Advanced Accounting	33108									X																							
Advanced AET/IMMT Work Based Learning	41068													X																			
Advanced Agricultural Mechanics	18402	X																															
Advanced Agricultural Power	18411	X																															
Advanced Agricultural Technology & Mechanical Systems Work Based Learning	18049	X																															
Advanced Animal Science	18103		X																														
Advanced Animal Science, Health and Related Industries Work Based Learning	18150		X																														
Advanced Aviation Maintenance & Operations Work Based Learning	40701																		X														
Advanced Aviation Production Work Based Learning	41078														X																		
Advanced Biotechnology Work Based Learning	14298																					X											
Advanced Business Finance Work Based Learning	33200									X																							
Advanced Business Management & Entrepreneurship Work Based Learning	32998								X																								
Advanced Construction & Design Work Based Learning	38110																	X															
Advanced Corrections, Security, Law & Law Enforcement Services Work Based Learning	44350																															X	
Advanced Diversified Agricultural Science Work Based Learning	18400			X																													
Advanced Drafting/CAD	21150															X																	
Advanced Early Childhood Development & Services Work Based Learning	19302																													X			
Advanced Electricity & Electronics	41270						X																										

PATHWAY CROSSOVER COURSE INFORMATION | **ALPHABETICAL BY COURSE TITLE**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Advanced Electronics	21202															X																
Advanced Emergency & Fire Management Services Work Based Learning	44252																														X	
Advanced Energy Work Based Learning	41260						X																									
Advanced Engineering & Design Work Based Learning	21048															X																
Advanced Family, Community & Consumer Services (Human Services) Work Based Learning	19299																							X								
Advanced Food Products & Processing Systems Work Based Learning	18350				X																											
Advanced Food Science	18317				X																											
Advanced Government & Public Administration Work Based Learning	43260																															X
Advanced Health Science Work Based Learning	36993																						X									
Advanced Information Support & Service Work Based Learning	30098																								X							
Advanced Logistics & Supply Chain Management Work Based Learning	20198																			X												
Advanced Manufacturing Work Based Learning	13398																X															
Advanced Marketing Work Based Learning	12199										X																					
Advanced Materials & Fabrication	38010																X	X														
Advanced Media Design & Communications Work Based Learning	30248																									X						
Advanced Media Design & Production	31091																									X						
Advanced Natural Resources & Environmental Sustainability Work Based Learning	18550							X																								
Advanced Networking & Telecommunications Work Based Learning	31048																										X					
Advanced Plant & Animal Science	18302		X	X		X																										
Advanced Plant Science & Industry Work Based Learning	18110					X																										
Advanced Programming & Software Development Work Based Learning	30198																											X				
Advanced Restaurant & Event Management Work Based Learning	16108											X																				
Advanced Teaching/Training Work Based Learning	19158																													X		
Advanced Travel & Tourism Work Based Learning	16998												X																			
Advanced Vehicle Maintenance & Repair Work Based Learning	40251																				X											
Aerospace Drawings I	41500														X																	
Aerospace Drawings II	41510														X																	

PATHWAY CROSSOVER COURSE INFORMATION | **ALPHABETICAL BY COURSE TITLE**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Aerospace Engineering	21013														X	X																	
Aerostructures	40620														X																		
AET/IMMT Work Based Learning	21068													X																			
Agribusiness Management	18201	X	X	X	X	X		X																									
Agricultural Biotechnology	18308		X	X																													
Agricultural Construction	18403	X		X																													
Agricultural Engineering & Technology	18415	X		X																													
Agricultural Entrepreneurship	18202	X	X	X	X	X		X																									
Agricultural Fabrication	18409	X		X																													
Agricultural Food Science	18305		X	X	X																												
Agricultural Leadership & Communications	18203	X	X	X	X	X		X																									
Agricultural Mechanics	18401	X		X																													
Agricultural Technology & Mechanical Systems Work Based Learning	18048	X																															
Agricultural Welding I	18404	X		X													X																
Agricultural Welding II	18407	X															X																
Agriculture Explorations I	68001	X	X	X	X	X		X																									
Agriculture Explorations II	68002	X	X	X	X	X		X																									
Agriscience	18002	X	X	X	X	X		X																									
Aircraft Systems	40420														X				X														
Alternative Power	40210																				X												
AMT General I	40431																		X														
AMT General II	40432																		X														
AMT General III	40433																		X														
AMT General IV	40434																		X														
Anatomy & Physiology	03053																					X	X										
Animal Health	18105		X																														
Animal Science	18101		X	X	X																												
Animal Science, Health & Related Industries Work Based Learning	18148		X																														
AP Computer Science A	10157																												X				
AP Computer Science Principles	31094																												X				
AP Cybersecurity	10024																								X		X	X					
AP Environmental Science	03207						X																										
AP Introduction to Business	12051								X	X	X									X													
AP Networking	10023																										X						
Applied Biochemistry	03203																					X											
Applied Biotechnology	18320																					X											
Applied Business Development	32200								X			X																					

PATHWAY CROSSOVER COURSE INFORMATION | **ALPHABETICAL BY COURSE TITLE**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Applied Business Technology Applications	33110									X	X																					
Applied Game Design	10165																									X		X				
Applied Graphic Design	31090																									X						
Applied Telecommunications	11049																										X					
Architectural Design I	21203																	X														
Architectural Design II	38223																	X														
Audio/Video Production I	30103										X															X						
Audio/Video Production II	30150																									X						
Auto Collision I	40300																				X											
Auto Collision II	40302																				X											
Auto Refinishing I	40310																				X											
Auto Refinishing II	40312																				X											
Automated Integrated Systems I	39010													X																		
Automated Integrated Systems II	39020													X																		
Aviation Fundamentals	40410														X				X													
Aviation Maintenance & Operations Work Based Learning	40700																		X													
Aviation Production Work Based Learning	21078														X																	
Aviation Tooling	40600														X																	
Aviation Work Experience - Comprehensive	40701																		X													
Baking & Pastry II	16057											X																				
Baking & Pastry I	16056											X																				
Banking & Finance	12101									X																						
Basic Automotive Care and Information	40050																				X											
Biomedical Innovation	14255																					X										
Biotechnology Essentials	21014																					X										
Biotechnology Work Based Learning	14998																					X										
Brakes I	40204																				X											
Brakes II	40206																				X											
Business Communications	12009								X	X	X									X											X		
Business Economics	12105								X	X	X																				X		X
Business Essentials	12050								X	X	X	X	X							X	X												
Business Finance Work Based Learning	12148									X																						
Business Law	12054								X	X										X											X		X
Business Management	12052								X		X									X											X		X
Business Management & Entrepreneurship Work Based Learning	12098								X																								
Capstone in Agriculture	18003			X																												
Care of Athletes	14062																						X									

PATHWAY CROSSOVER COURSE INFORMATION | **ALPHABETICAL BY COURSE TITLE**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Career & Life Planning	19258										X	X												X					X	X			X
CDL Entry Level Driver Training	40240																			X	X													
Certified Medication Aide	36156																						X										
Certified Nursing Assistant	14997																						X										
Certified Patient Care Technician	14202																						X										
Certified Protection Officer	44210																															X		
Chemistry	03101																					X	X											
Civil Engineering & Architecture	21012															X																		
Coaching & Leadership	19154																														X			
College Accounting	33109									X																								
Community Connections	19297										X	X																						
Composites	40640														X																			
Computer Applications (Grade 8/Grade 9)	60004/10004																					X			X	X	X							
Computer Integrated Manufacturing	21010													X		X	X																	
Computer Programming	10152													X												X		X						
Computer Science Capstone	10160																											X						
Computer-Aided Machining (CAM) I	13204																X																	
Computer-Aided Machining (CAM) II	39205																X																	
Computing Systems (Grade 8/Grade 9)	60002/10004																					X			X		X	X						
Construction & Design Work Based Learning	38100																	X																
Corrections Officer	44215																															X		
Corrections, Security, Law & Law Enforcement Services Work Based Learning	44298																															X		
Crop & Range Management	18081					X																												
Culinary Arts I	16053											X																						
Culinary Arts II	16055											X																						
Culinary Essentials	16052											X	X											X										
Cutting Processes	39206																X																	
Cybersecurity I	10020													X											X			X						
Cybersecurity II	10900																								X									
Database Applications	10053																											X						
DC Electronics	40460																		X															
Diesel and Heavy Equipment Technology I	40218																				X													
Diesel and Heavy Equipment Technology II	40238																				X													
Diesel and Heavy Equipment Technology III	40239																				X													
Digital Electronics	21008													X		X			X								X							
Digital Marketing and Advertising	35162										X																							
Digital Media Technology	30104																									X								

PATHWAY CROSSOVER COURSE INFORMATION | **ALPHABETICAL BY COURSE TITLE**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Dimensions of Wellness	19250																							X								
Diversified Agricultural Science Work Based Learning	18338			X																												
Drafting/Architecture I	21103																	X														
Drafting/Architecture II	38050																	X														
Drafting/CAD	21107													X	X	X	X	X														
Drafting/Print Reading	21102																	X														
Drawing for Designers	30006																									X						
Drive Train Technology I	40208																				X											
Early Childhood Development & Services Work Based Learning	19301																												X			
Educational Leadership	19198																													X		
EKG Technician	36991																						X									
Electrical Technology	17113																	X														
Electronics & Electrical Systems I	40200																				X											
Electronics & Electrical Systems II	40202																				X											
Emergency & Fire Management Services Work Based Learning	44250																														X	
Emerging Technologies	21053																					X										
EMS First Responder	44050																						X							X	X	
EMT I	44060																						X								X	
EMT II	44065																						X								X	
Energy Industry Fundamentals	41105						X																									
Energy Work Based Learning	41250						X																									
Energy, Power & Society	41150						X																									
Engine Mechanical Repair	40216																				X											
Engine Performance I	40220																				X											
Engine Performance II	40222																				X											
Engineering & Design Work Based Learning	41048															X																
Engineering Design	21006													X		X																
Engineering Design Capstone	21007															X																
Engineering Systems	21016															X																
Entrepreneurship	12053	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Environmental Resources & Ecology	37506							X																								
Equine Science	18104		X	X																												
Event Planning & Management	34052										X	X	X																			
Family Studies	19255																							X					X	X		
Family, Community & Consumer Services (Human Services) Work Based Learning	19296																							X								
Fire Science I	44100																														X	

PATHWAY CROSSOVER COURSE INFORMATION | **ALPHABETICAL BY COURSE TITLE**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Fire Science II	44101																															X	
Fire Service Special Operations	44080																															X	
Fluid Power	39302						X							X																			
Food Products & Processing Systems Work Based Learning	18348				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 Artificial Intelligence	10170																											X					
Foundations of Computer Science	41010																											X					
Foundations of Early Childhood Development	19052																												X				
Foundations of Electronics	21201						X							X		X			X														
Foundations of Hospitality & Lodging	16101												X																				
Foundations of Information Technology	10001																								X		X						
Foundations of Mental and Behavioral Health	19260																						X										
Foundations of Rehab	14060																						X										
Foundations of Travel & Tourism	16151										X	X	X																				
Fundamentals of Electrical Theory	17101													X																			
Fundamentals of Electricity & Electronics	41170						X																				X						
Fundamentals of Emergency Services	14055																						X										
General Carpentry I	17002																	X															
General Carpentry II	38002																	X															
General Service I	40150																				X												
General Service II	40152																				X												
General Service III	40154																				X												
GIS Spatial Applications	21112																										X						
GIS Technology	21058																										X						
GMAW I	39211																X																
GMAW II	39212																X																
Government & Public Administration Fundamentals	43105																																X
Government & Public Administration Work Based Learning	43253																																X
Government & Public Media Relations	04990																																X
Graphic Design I	30102										X															X							
Graphic Design II	05162																									X							
GTAW I	39213																X																

PATHWAY CROSSOVER COURSE INFORMATION | **ALPHABETICAL BY COURSE TITLE**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
GTAW II	39214																X															
Hand & Power Tools	40400													X	X		X		X													
Hazardous Materials for the First Responder	44070																			X										X	X	
Health Care Essentials I	14254																						X									
Health Care Essentials II	36254																						X									
Health Science Work Based Learning	36992																						X									
Home Health Aide	36053																						X									
Horticulture	18052			X	X	X																										
Horticulture, Floriculture & Greenhouse Management	18057					X																										
Human Body Systems	14102																					X	X									
Human Growth & Development – Early Years	45004																							X					X	X		
HVAC Technology	17056						X											X														
IB Business & Management	12059								X		X																					
IB Computing	10159																											X				
Industrial Maintenance Systems	13303													X																		
Information Support & Services Work Based Learning	10098																								X							
Information Support & Services I	10052																								X							
Information Support & Services II	10097																								X							
Interactive Media	10203																									X						
Interior Architectural Design	38212																	X														
Interior Design I	19263																	X														
Interior Design II	22212																	X														
Introduction to Agriculture	18001	X	X	X	X	X		X																								
Introduction to Computer Coding	31001													X														X				
Introduction to Education	19199																												X	X		
Introduction to Emergency Medical Services (EMS)	44005																														X	
Introduction to Energy	41100						X																									
Introduction to Engineering	41310													X		X																
Introduction to Environmental Science	41207						X																									
Introduction to Family & Consumer Sciences	19251											X	X											X					X	X		
Introduction to Government & Public Administration	43001																															X
Introduction to Health Care	14000																						X									
Introduction to Law, Public Safety, Corrections & Security (LPSCS)	44001																														X	X

PATHWAY CROSSOVER COURSE INFORMATION | **ALPHABETICAL BY COURSE TITLE**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Introduction to Manufacturing	13001													X	X		X																
Introduction to Physical Computing	31002													X																			
Introduction to Skilled Trades	38001													X	X		X	X	X		X												
Introduction to Web & Digital Media	05254																									X		X					
Introduction to Welding	13207																X																
Investing	12107									X																							
IT for Service Professions	44010																																X
Journalism & Media Communications	30100																									X							
Law Enforcement I	44200																															X	
Law Enforcement II	44201																															X	
Leadership Service in Action	19257																							X						X			
Legal Proceedings	44310																															X	X
Lifespan Development	45014																							X						X			X
Logistics & Supply Change Management Work Based Learning	20197																			X													
Logistics I	20152																			X													
Logistics II	20153																			X													
Machine Tool Technology	13203																X																
Machine Tool Technology II	13213																X																
Manufacturing Work Based Learning	13348																X																
Marketing Applications	35300										X																						
Marketing Communications	35168										X																						
Marketing Management	12166										X																						
Marketing Research	12196										X																						
Marketing Work Based Learning	12198										X																						
Materials Science in Engineering	41355						X							X		X																	
Mechanical Drive Systems	13302						X							X																			
Mechanical/Electrical/Plumbing (MEP) I	17062																	X															
Media & Public Relations	43115																									X							
Media Design & Communications - Web & Design Work Based Learning	31096																									X							
Media Design & Communications -Graphic Design Work Based Learning	10248																									X							
Media Design & Production	30151																									X							
Medical Imaging	14103																						X										
Medical Interventions	14105																					X	X										
Medical Terminology	14154																						X									X	
Meteorology	03006						X																										
Mobile HVAC	40228																				X												

PATHWAY CROSSOVER COURSE INFORMATION | **ALPHABETICAL BY COURSE TITLE**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Natural Resource & Environmental Sustainability Work Based Learning	18548							X																									
Natural Resource Management	18504			X				X																									
Network Systems I	10112																										X						
Network Systems II	10147																										X						
Networking & Telecommunications Work Based Learning	11048																										X						
Nursery & Landscape Operations	18067					X																											
Nutrition & Dietetics	19253											X	X										X	X									
Orientation to Early Childhood Development	19051																												X				
Particular Topics in Engineering	21015																					X											
Pharmacology	14253																					X	X										
Photo Imaging I	30105																									X							
Photo Imaging II	30115																									X							
Plant & Animal Science	18301		X	X		X																											
Plant & Soil Science	18058			X	X	X																X											
Plant Science & Industry Work Based Learning	18098					X																											
Plumbing Technology	17058																	X															
Practical Law	44300																														X		X
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	X																				
Principles of Pharmacy	36157																						X										
Principles of Phlebotomy	14104																						X										
Private Pilot Ground School	40540																		X														
Production Methods I	13052														X		X																
Production Methods II	39052																X																
Production Print Reading I	21108													X	X	X	X	X	X														
Production Print Reading II	39108																X																
Programming & Software Development Work Based Learning	10198																											X					
Project Management	41350															X																	
Remodeling & Building Maintenance	17009																	X															
Research & Design for Preconstruction	21109																	X															
Research & Design in Building Trades	17005																	X															
Research in Agriculture	18206	X	X	X	X	X		X																									
Restaurant & Event Management Work Based Learning	16098											X																					

PATHWAY CROSSOVER COURSE INFORMATION

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Risk Management & Insurance	12106									X																							
Robotics I	21009													X		X	X					X											
Robotics II	39009													X																			
Sheet Metal Technology	13205																	X															
Small Animal Care	18102		X	X																													
Small Engine & Powertrains I	40212																				X												
Small Engines & Powertrains II	40214																				X												
Small Power Systems	18410	X		X																													
Small Uncrewed Aircraft Systems (sUAS)	40490																		X														
SMAW I	39209																X																
SMAW II	39210																X																
Special Projects & Research in Aviation	41520														X																		
Sports Medicine I	14072																						X										
Sports Medicine II	14073																						X										
Sports/Entertainment Marketing	12163										X																						
Steering & Suspension I	40224																				X												
Steering & Suspension II	40226																				X												
Supply Chain Management	20151																			X													
Sustainable/Alternative Agriculture	18310			X				X																									
Teaching as a Career	19151																													X			
Teaching Observation	42251																												X	X			
Teaching/Training Work Based Learning	19152																													X			
Technology for Teachers	19155																													X			
Telecommunications	10106																										X						
Travel & Tourism Work Based Learning	16148												X																				
Vehicle Maintenance & Repair Work Based Learning	40250																				X												
Web Design	10201										X														X	X		X					
Welding Processes I	39207	X		X										X			X																
Welding Processes II	39208	X															X																
Wildlife & Recreation Management	18501							X																									
Wind Energy Operations	41160						X																										
Woodworking Principles	17007																	X															

Listed by Course Number

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0301	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Meteorology	03006						X																									
Anatomy & Physiology	03053																					X	X									
Chemistry	03101																					X	X									
Applied Biochemistry	03203																					X										
AP Environmental Science	03207						X																									
Government & Public Media Relations	04990																															X
Graphic Design II	5162																									X						
Introduction to Web & Digital Media	05254																									X		X				
Foundations of Information Technology	10001																								X		X					
Cybersecurity I	10020													X											X			X				
AP Networking	10023																										X					
AP Cybersecurity	10024																								X		X	X				
Information Support & Services I	10052																								X							
Database Applications	10053																											X				
Information Support & Services II	10097																								X							
Information Support & Services Work Based Learning	10098																								X							
Telecommunications	10106																										X					
Network Systems I	10112																										X					
Network Systems II	10147																										X					
Computer Programming	10152													X												X		X				
AP Computer Science A	10157																											X				
IB Computing	10159																											X				
Computer Science Capstone	10160																											X				
Applied Game Design	10165																									X		X				
Foundations of Artificial Intelligence	10170																											X				
Programming & Software Development Work Based Learning	10198																											X				
Web Design	10201										X														X	X		X				
2D Animation	10202									X																X						
Interactive Media	10203																									x						
3D Animation	10210																									X						
Media Design & Communications -Graphic Design Work Based Learning	10248																									x						
Cybersecurity II	10900																								x							

PATHWAY CROSSOVER COURSE INFORMATION | **LISTED BY COURSE NUMBER**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Networking & Telecommunications Work Based Learning	11048																										X					
Applied Telecommunications	11049																										X					
Business Communications	12009								X	X	X									X										X		
Business Essentials	12050								X	X	X	X	X							X	X											
AP Introduction to Business	12051								X	X	X									X												
Business Management	12052								X		X									X										X		X
Entrepreneurship	12053	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Business Law	12054								X	X										X										X		X
IB Business & Management	12059								X		X																					
Business Management & Entrepreneurship Work Based Learning	12098								X																							
Banking & Finance	12101									X																						
Accounting	12104								X	X	X									X										X		X
Business Economics	12105								X	X	X																			X		X
Risk Management & Insurance	12106									X																						
Investing	12107									X																						
Business Finance Work Based Learning	12148									X																						
Sports/Entertainment Marketing	12163										X																					
Principles of Marketing	12164								X		X	X	X																			
Marketing Management	12166										X																					
Marketing Research	12196										X																					
Marketing Work Based Learning	12198										X																					
Advanced Marketing Work Based Learning	12199										X																					
Introduction to Manufacturing	13001													X	X		X															
Production Methods I	13052														X		X															
Machine Tool Technology	13203																X															
Computer-Aided Machining (CAM) I	13204																X															
Sheet Metal Technology	13205																	X														
Introduction to Welding	13207																X															
Machine Tool Technology II	13213																X															
Mechanical Drive Systems	13302						X							X																		
Industrial Maintenance Systems	13303													X																		
Manufacturing Work Based Learning	13348																X															
Advanced Manufacturing Work Based Learning	13398																X															
Introduction to Health Care	14000																						X									
Fundamentals of Emergency Services	14055																						X									
Foundations of Rehab	14060																						X									

PATHWAY CROSSOVER COURSE INFORMATION | **LISTED BY COURSE NUMBER**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0301	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Care of Athletes	14062																						X									
Sports Medicine I	14072																						X									
Sports Medicine II	14073																						X									
Human Body Systems	14102																					X	X									
Medical Imaging	14103																						X									
Principles of Phlebotomy	14104																						X									
Medical Interventions	14105																					X	X									
Medical Terminology	14154																						X								X	
Certified Patient Care Technician	14202																						X									
Principles of Biomedical Science	14251																					X										
Pharmacology	14253																					X	X									
Health Care Essentials I	14254																						X									
Biomedical Innovation	14255																					X										
Advanced Biotechnology Work Based Learning	14298																					X										
Certified Nursing Assistant	14997																						X									
Biotechnology Work Based Learning	14998																					X										
Culinary Essentials	16052											X	X											X								
Culinary Arts I	16053											X																				
Culinary Arts II	16055											X																				
Baking & Pastry I	16056											X																				
Baking & Pastry II	16057											X																				
Restaurant & Event Management Work Based Learning	16098											X																				
Foundations of Hospitality & Lodging	16101												X																			
Advanced Restaurant & Event Management Work Based Learning	16108											X																				
Travel & Tourism Work Based Learning	16148												X																			
Foundations of Travel & Tourism	16151										X	X	X																			
Advanced Travel & Tourism Work Based Learning	16998												X																			
General Carpentry I	17002																	X														
Research & Design in Building Trades	17005																	X														
Woodworking Principles	17007																	X														
Remodeling & Building Maintenance	17009																	X														
HVAC Technology	17056						X											X														
Plumbing Technology	17058																	X														
Mechanical/Electrical/Plumbing (MEP) I	17062																	X														
Fundamentals of Electrical Theory	17101													X																		
Electrical Technology	17113																	X														

PATHWAY CROSSOVER COURSE INFORMATION | **LISTED BY COURSE NUMBER**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Introduction to Agriculture	18001	X	X	X	X	X		X																								
Agriscience	18002	X	X	X	X	X		X																								
Capstone in Agriculture	18003			X																												
Agricultural Technology & Mechanical Systems Work Based Learning	18048	X																														
Advanced Agricultural Technology & Mechanical Systems Work Based Learning	18049	X																														
Horticulture	18052			X	X	X																										
Horticulture, Floriculture & Greenhouse Management	18057					X																										
Plant & Soil Science	18058			X	X	X																X										
Nursery & Landscape Operations	18067					X																										
Crop & Range Management	18081					X																										
Plant Science & Industry Work Based Learning	18098					X																										
Animal Science	18101		X	X	X																											
Small Animal Care	18102		X	X																												
Advanced Animal Science	18103		X																													
Equine Science	18104		X	X																												
Animal Health	18105		X																													
Advanced Plant Science & Industry Work Based Learning	18110					X																										
Animal Science, Health & Related Industries Work Based Learning	18148		X																													
Advanced Animal Science, Health and Related Industries Work Based Learning	18150		X																													
Agribusiness Management	18201	X	X	X	X	X		X																								
Agricultural Entrepreneurship	18202	X	X	X	X	X		X																								
Agricultural Leadership & Communications	18203	X	X	X	X	X		X																								
Research in Agriculture	18206	X	X	X	X	X		X																								
Plant & Animal Science	18301		X	X		X																										
Advanced Plant & Animal Science	18302		X	X		X																										
Agricultural Food Science	18305		X	X	X																											
Agricultural Biotechnology	18308		X	X																												
Sustainable/Alternative Agriculture	18310			X				X																								
Advanced Food Science	18317				X																											
Applied Biotechnology	18320																					X										
Diversified Agricultural Science Work Based Learning	18338			X																												
Food Products & Processing Systems Work Based Learning	18348				X																											

PATHWAY CROSSOVER COURSE INFORMATION | **LISTED BY COURSE NUMBER**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0301	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Advanced Food Products & Processing Systems Work Based Learning	18350				X																											
Advanced Diversified Agricultural Science Work Based Learning	18400			X																												
Agricultural Mechanics	18401	X		X																												
Advanced Agricultural Mechanics	18402	X																														
Agricultural Construction	18403	X		X																												
Agricultural Welding I	18404	X		X													X															
Agricultural Welding II	18407	X															X															
Agricultural Fabrication	18409	X		X																												
Small Power Systems	18410	X		X																												
Advanced Agricultural Power	18411	X																														
Agricultural Engineering & Technology	18415	X		X																												
Wildlife & Recreation Management	18501							X																								
Natural Resource Management	18504			X				X																								
Natural Resource & Environmental Sustainability Work Based Learning	18548							X																								
Advanced Natural Resources & Environmental Sustainability Work Based Learning	18550							X																								
Orientation to Early Childhood Development	19051																												X			
Foundations of Early Childhood Development	19052																												X			
Teaching as a Career	19151																													X		
Teaching/Training Work Based Learning	19152																													X		
Coaching & Leadership	19154																													X		
Technology for Teachers	19155																													X		
Advanced Teaching/Training Work Based Learning	19158																													X		
Educational Leadership	19198																													X		
Introduction to Education	19199																												X	X		
Dimensions of Wellness	19250																							X								
Introduction to Family & Consumer Sciences	19251											X	X											X					X	X		
Nutrition & Dietetics	19253											X	X										X	X								
Food Science	19254				X							X										X										
Family Studies	19255																							X					X	X		
Leadership Service in Action	19257																							X					X			
Career & Life Planning	19258											X	X											X					X	X		X
Foundations of Mental and Behavioral Health	19260																							X								

PATHWAY CROSSOVER COURSE INFORMATION | **LISTED BY COURSE NUMBER**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Interior Design I	19263																	X															
Family, Community & Consumer Services (Human Services) Work Based Learning	19296																							X									
Community Connections	19297											X	X																				
Advanced Family, Community & Consumer Services (Human Services) Work Based Learning	19299																							X									
Early Childhood Development & Services Work Based Learning	19301																												X				
Advanced Early Childhood Development & Services Work Based Learning	19302																												X				
Supply Chain Management	20151																			X													
Logistics I	20152																			X													
Logistics II	20153																			X													
Logistics & Supply Change Management Work Based Learning	20197																			X													
Advanced Logistics & Supply Chain Management Work Based Learning	20198																			X													
Engineering Design	21006													X		X																	
Engineering Design Capstone	21007															X																	
Digital Electronics	21008													X		X			X								X						
Robotics I	21009													X		X	X					X											
Computer Integrated Manufacturing	21010													X		X	X																
Civil Engineering & Architecture	21012															X																	
Aerospace Engineering	21013														X	X																	
Biotechnology Essentials	21014																					X											
Particular Topics in Engineering	21015																					X											
Engineering Systems	21016															X																	
Advanced Engineering & Design Work Based Learning	21048															X																	
Emerging Technologies	21053																					X											
GIS Technology	21058																										X						
AET/IMMT Work Based Learning	21068													X																			
Aviation Production Work Based Learning	21078														X																		
Drafting/Print Reading	21102																	X															
Drafting/Architecture I	21103																	X															
Drafting/CAD	21107													X	X	X	X	X															
Production Print Reading I	21108													X	X	X	X	X	X														
Research & Design for Preconstruction	21109																	X															
GIS Spatial Applications	21112																										X						
Advanced Drafting/CAD	21150															X																	

PATHWAY CROSSOVER COURSE INFORMATION | **LISTED BY COURSE NUMBER**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Foundations of Electronics	21201						X							X		X			X													
Advanced Electronics	21202															X																
Architectural Design I	21203																	X														
Interior Design II	22212																	X														
Drawing for Designers	30006																									X						
Advanced Information Support & Service Work Based Learning	30098																							X								
Journalism & Media Communications	30100																									X						
Principles of Illustration	30101																									X						
Graphic Design I	30102										X															X						
Audio/Video Production I	30103										X															X						
Digital Media Technology	30104																									X						
Photo Imaging I	30105																									X						
Photo Imaging II	30115																									X						
Audio/Video Production II	30150																									X						
Media Design & Production	30151																									X						
Advanced Programming & Software Development Work Based Learning	30198																											X				
Advanced Media Design & Communications Work Based Learning	30248																									X						
Introduction to Computer Coding	31001													X														X				
Introduction to Physical Computing	31002													X																		
Advanced Networking & Telecommunications Work Based Learning	31048																										X					
Applied Graphic Design	31090																									X						
Advanced Media Design & Production	31091																									X						
AP Computer Science Principles	31094																											X				
Media Design & Communications - Web & Design Work Based Learning	31096																									X						
Applied Business Development	32200								X			X																				
Advanced Business Management & Entrepreneurship Work Based Learning	32998								X																							
Advanced Accounting	33108									X																						
College Accounting	33109									X																						
Applied Business Technology Applications	33110									X	X																					
Advanced Business Finance Work Based Learning	33200									X																						
Event Planning & Management	34052										X	X	X																			
Digital Marketing and Advertising	35162										X																					
Marketing Communications	35168										X																					
Marketing Applications	35300										X																					

PATHWAY CROSSOVER COURSE INFORMATION | **LISTED BY COURSE NUMBER**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Home Health Aide	36053																						X										
Certified Medication Aide	36156																						X										
Principles of Pharmacy	36157																						X										
Health Care Essentials II	36254																						X										
EKG Technician	36991																						X										
Health Science Work Based Learning	36992																						X										
Advanced Health Science Work Based Learning	36993																						X										
Environmental Resources & Ecology	37506							X																									
Introduction to Skilled Trades	38001													X	X		X	X	X		X												
General Carpentry II	38002																	X															
Advanced Materials & Fabrication	38010																X	X															
Drafting/Architecture II	38050																	X															
Construction & Design Work Based Learning	38100																	X															
Advanced Construction & Design Work Based Learning	38110																	X															
Interior Architectural Design	38212																	X															
Architectural Design II	38223																	X															
Robotics II	39009													X																			
Automated Integrated Systems I	39010													X																			
Automated Integrated Systems II	39020													X																			
Production Methods II	39052																X																
Production Print Reading II	39108																X																
Computer-Aided Machining (CAM) II	39205																X																
Cutting Processes	39206																X																
Welding Processes I	39207	X		X										X			X																
Welding Processes II	39208	X															X																
SMAW I	39209																X																
SMAW II	39210																X																
GMAW I	39211																X																
GMAW II	39212																X																
GTAW I	39213																X																
GTAW II	39214																X																
Fluid Power	39302						X							X																			
Basic Automotive Care and Information	40050																				X												
General Service I	40150																				X												
General Service II	40152																				X												
General Service III	40154																				X												

PATHWAY CROSSOVER COURSE INFORMATION | **LISTED BY COURSE NUMBER**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0301	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Electronics & Electrical Systems I	40200																				X											
Electronics & Electrical Systems II	40202																				X											
Brakes I	40204																				X											
Brakes II	40206																				X											
Drive Train Technology I	40208																				X											
Alternative Power	40210																				X											
Small Engine & Powertrains I	40212																				X											
Small Engines & Powertrains II	40214																				X											
Engine Mechanical Repair	40216																				X											
Diesel and Heavy Equipment Technology I	40218																				X											
Engine Performance I	40220																				X											
Engine Performance II	40222																				X											
Steering & Suspension I	40224																				X											
Steering & Suspension II	40226																				X											
Mobile HVAC	40228																				X											
Diesel and Heavy Equipment Technology II	40238																				X											
Diesel and Heavy Equipment Technology III	40239																				X											
CDL Entry Level Driver Training	40240																			X	X											
Vehicle Maintenance & Repair Work Based Learning	40250																				X											
Advanced Vehicle Maintenance & Repair Work Based Learning	40251																				X											
Auto Collision I	40300																				X											
Auto Collision II	40302																				X											
Auto Refinishing I	40310																				X											
Auto Refinishing II	40312																				X											
Hand & Power Tools	40400													X	X		X		X													
Aviation Fundamentals	40410														X				X													
Aircraft Systems	40420														X				X													
AMT General I	40431																		X													
AMT General II	40432																		X													
AMT General III	40433																		X													
AMT General IV	40434																		X													
AC Electronics	40450																		X													
DC Electronics	40460																		X													
Small Uncrewed Aircraft Systems (sUAS)	40490																		X													
Private Pilot Ground School	40540																		X													
Aviation Tooling	40600														X																	
Aerostructures	40620														X																	

PATHWAY CROSSOVER COURSE INFORMATION | **LISTED BY COURSE NUMBER**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
Composites	40640														X																	
Aviation Maintenance & Operations Work Based Learning	40700																		X													
Advanced Aviation Maintenance & Operations Work Based Learning	40701																		X													
Aviation Work Experience - Comprehensive	40701																		X													
Foundations of Computer Science	41010																											X				
Engineering & Design Work Based Learning	41048															X																
Advanced AET/IMMT Work Based Learning	41068													X																		
Advanced Aviation Production Work Based Learning	41078														X																	
Introduction to Energy	41100						X																									
Energy Industry Fundamentals	41105						X																									
Energy, Power & Society	41150						X																									
Wind Energy Operations	41160						X																									
Fundamentals of Electricity & Electronics	41170						X																				X					
Introduction to Environmental Science	41207						X																									
Energy Work Based Learning	41250						X																									
Advanced Energy Work Based Learning	41260						X																									
Advanced Electricity & Electronics	41270						X																									
Introduction to Engineering	41310													X		X																
Principles of Applied Engineering	41320						X									X																
Project Management	41350															X																
Materials Science in Engineering	41355						X							X		X																
Aerospace Drawings I	41500														X																	
Aerospace Drawings II	41510														X																	
Special Projects & Research in Aviation	41520														X																	
Teaching Observation	42251																													X	X	
Introduction to Government & Public Administration	43001																															X
Government & Public Administration Fundamentals	43105																															X
Media & Public Relations	43115																									X						
Government & Public Administration Work Based Learning	43253																															X
Advanced Government & Public Administration Work Based Learning	43260																															X
Introduction to Law, Public Safety, Corrections & Security (LPSCS)	44001																														X	X
Introduction to Emergency Medical Services (EMS)	44005																															X
IT for Service Professions	44010																															X

PATHWAY CROSSOVER COURSE INFORMATION | **LISTED BY COURSE NUMBER**

COURSE TITLE	NUMBER	Agricultural Technology & Mechanical Systems 01.0201	Animal Science, Health & Related Industries 01.0901	Diversified Agricultural Science 01.0000	Food Products & Processing Systems 01.0401	Plant Science & Industry Operations 01.1101	Energy 14.4801	Natural Resources & Environmental Sustainability 03.0101	Business Management & Entrepreneurship 52.0201	Business Finance 52.0801	Marketing 52.1402	Restaurant & Event Management 12.0504	Travel & Tourism 52.0901	Automation Engineering & Industrial Machine Maintenance Technology 15.0406	Aviation Production 15.0000	Engineering & Design 14.4101	Manufacturing 48.0000	Construction & Design 46.0000	Aviation Maintenance and Operations 47.0607	Logistics & Supply Chain Management 52.0203	Vehicle Maintenance and Repair 47.0600	Biotechnology 26.1201	Health Science 51.3901	Family, Community & Consumer Services 44.0000	Information Support & Services 11.0801	Media Design & Communications 11.0801	Networking & Telecommunications 11.0901	Programming & Software Development 11.0201	Early Childhood Development & Services 19.0709	Teaching/Training 13.0101	Corrections, Security, Law & Law Enforcement Services 43.0199	Emergency & Fire Management Services 43.0299	Government & Public Administration 44.0401
EMS First Responder	44050																						X							X	X	
EMT I	44060																						X								X	
EMT II	44065																						X								X	
Hazardous Materials for the First Responder	44070																			X										X	X	
Fire Service Special Operations	44080																														X	
Fire Science I	44100																														X	
Fire Science II	44101																														X	
Law Enforcement I	44200																													X		
Law Enforcement II	44201																													X		
Certified Protection Officer	44210																													X		
Corrections Officer	44215																													X		
Forensic Science I	44225																													X		
Forensic Science II	44226																													X		
Emergency & Fire Management Services Work Based Learning	44250																														X	
Advanced Emergency & Fire Management Services Work Based Learning	44252																														X	
Corrections, Security, Law & Law Enforcement Services Work Based Learning	44298																													X		
Practical Law	44300																													X		X
Foundations in Law	44305																													X		X
Legal Proceedings	44310																													X		X
Advanced Corrections, Security, Law & Law Enforcement Services Work Based Learning	44350																													X		
Human Growth & Development – Early Years	45004																							X					X	X		
Lifespan Development	45014																							X						X		X
Agriculture Explorations I	68001	X	X	X	X	X		X																								
Agriculture Explorations II	68002	X	X	X	X	X		X																								
Computing Systems (Grade 8/Grade 9)	60002/10004																					X			X		X	X				
Computer Applications (Grade 8/Grade 9)	60004/10004																					X			X	X	X					

Kansas State Board of Education

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Vision

Kansas leads the world in the success of each student.

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.

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Kansas divided into the ten State Board of Education districts.

KANSAS STATE DEPARTMENT OF EDUCATION

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May 27, 2020

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