



**PROGRAMS OF STUDY**

**U5**



## A Tool for Identifying a Career Cluster & Career Pathway

The Unit 5 Career Pathways Guide is a resource designed to help you connect your course selection and your extracurricular activities to your career interests and plans. The guide utilizes the National Career Cluster framework to outline occupational choices and educational preparation that relate to the various groupings of career fields. We encourage you to use this guide to help you choose courses and activities offered that will allow you to explore and develop your career interests. Course selection should be purposeful and take into account high school graduation requirements, college admission requirements, and career preparation.

Unit 5 students are initially introduced to Naviance in middle school as they complete assessments to identify areas of interest and research potential career clusters. Naviance is an Internet based career exploration and planning tool used by Unit 5 students to explore career and college options as well as develop a high school course plan aligned to a college/career plan for post-high school.

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PATHWAYS TO COLLEGE & CAREER READINESS

# CareerClusters®

## **Agriculture, Food & Natural Resources**

- Agribusiness Systems
- Animal Systems
- Environmental Service Systems
- Food Products & Processing Systems
- Natural Resources Systems
- Plant Systems
- Power, Structural & Technical Systems
- Architecture & Construction

## **Architecture & Construction**

- Construction
- Design/Pre-Construction
- Maintenance/Operations

## **Arts, A/V Technology & Communications**

- A/V Technology & Film
- Journalism & Broadcasting
- Performing Arts
- Printing Technology
- Telecommunications
- Visual Arts

## **Business Management & Administration**

- Administrative Support
- Business Information Management
- General Management
- Human Resources Management
- Operations Management

## **Education & Training**

- Administration & Administrative Support
- Professional Support Services
- Teaching/Training

## **Finance**

- Accounting
- Banking Services
- Business Finance
- Insurance
- Securities & Investments

## **Government & Public Administration**

- Foreign Service
- Governance
- National Security

- Planning
- Public Management & Administration
- Regulation
- Revenue & Taxation

## **Health Sciences**

- Biotechnology Research & Development
- Diagnostic Services
- Health Informatics
- Support Services
- Therapeutic Services

## **Hospitality & Tourism**

- Lodging
- Recreation, Amusements & Attractions
- Restaurants & Food/Beverage Services
- Travel & Tourism

## **Human Services**

- Consumer Services
- Counseling & Mental Health Services
- Early Childhood Development & Services
- Family & Community Services
- Personal Care Services

## **Information Technology**

- Information Support & Services
- Network Systems
- Programming & Software Development
- Web & Digital Communications

## **Law, Public Safety, Corrections & Security**

- Correction Services
- Emergency & Fire Management Services
- Law Enforcement Services
- Legal Services
- Security & Protective Services

## **Manufacturing**

- Health, Safety & Environmental Assurance
- Logistics & Inventory Control
- Maintenance, Installation & Repair
- Manufacturing Production Process Dev.
- Production
- Quality Assurance

[www.careertech.org/Career-Clusters](http://www.careertech.org/Career-Clusters)

**Marketing**

- Marketing Communications
- Marketing Management
- Marketing Research
- Merchandising
- Professional Sales

**Science, Technology, Engineering & Mathematics**

- Engineering & Technology
- Science & Mathematics

**Transportation, Distribution & Logistics**

- Facility & Mobile Equipment Maintenance
- Health, Safety & Environmental Management
- Logistics Planning & Management Services
- Sales & Service
- Transportation Operations
- Transportation Systems/Infrastructure Planning, Management & Regulation
- Warehousing & Distribution Center Operations

# The Sixteen Career Clusters

Career Maps from [Illinois Career Cluster Framework](#)

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## Unit 5 High School Counseling Office Information

### Normal Community High School

Counseling Office: (309) 557-4644

<u>Students</u>	<u>Counselor</u>	<u>Email</u>
A - Col	Addie Ince	<a href="mailto:incea@unit5.org">incea@unit5.org</a>
Com - G	Ryan Short	<a href="mailto:shortre@unit5.org">shortre@unit5.org</a>
H - Le	Jack Ratzsch	<a href="mailto:ratzscj@unit5.org">ratzscj@unit5.org</a>
Li - Pf	Jenn Giermann	<a href="mailto:giermanj@unit5.org">giermanj@unit5.org</a>
Ph - Stol	Kristi Chase	<a href="mailto:chasek@unit5.org">chasek@unit5.org</a>
Stom - Z & ELL	Joan Fee	<a href="mailto:feej@unit5.org">feej@unit5.org</a>
Post High School	Karrin Hawkins	<a href="mailto:hawkinsk@unit5.org">hawkinsk@unit5.org</a>

### Normal Community West High School

Counseling Office: (309) 557-4969

<u>Students</u>	<u>Counselor</u>	<u>Email</u>
A - C	Brooke Bollmann	<a href="mailto:bollmannb@unit5.org">bollmannb@unit5.org</a>
D - H	Marty Tarmann	<a href="mailto:tarmannk@unit5.org">tarmannk@unit5.org</a>
I - Mh	Lauren Goveia	<a href="mailto:goveial@unit5.org">goveial@unit5.org</a>
Mi - Se	Debbie Sondgeroth	<a href="mailto:sondgerd@unit5.org">sondgerd@unit5.org</a>
Sf - Z	Carrie Hoffman	<a href="mailto:hoffmanc@unit5.org">hoffmanc@unit5.org</a>
Post High School	Corey Ostling	<a href="mailto:ostlingcm@unit5.org">ostlingcm@unit5.org</a>

## Overview & Definitions

The following terms are used nationally when working with students to select courses that support and align to their future post-secondary goals.

**Career Cluster:** Group of occupations and industries that have a set of foundational knowledge and skills in common. There are 16 nationally recognized career clusters which each contain multiple career pathways.

**Career Pathway:** Multi-year program of academic and technical study that prepares students for a full range of post-secondary options within each career cluster. Career pathways provide a context for exploring career options given all levels of education, as they provide students the knowledge and skills necessary for future education and employment. Career pathways also include opportunities to earn college credit and industry recognized credentials or certificates as well as gain external career experience while in high school.

**Pathway Courses:** Recommended sequence of courses which provide students opportunities to explore and develop skills within a specific career area.

**Related Electives:** Courses which provide students additional opportunities within the specified career area or opportunities to develop skills and knowledge in a closely related area.

**Workplace Learning Experiences:** Educational opportunities in which students engage in authentic and relevant work aligned with a career pathway. These experiences allow students to participate in a professional work environment and assist with career skill development and decision making.

**Certification:** Credentials awarded to students by an independent third party verifying qualifications or competencies in a career skill area. Certifications are sought or accepted by employers as preferred or required credentials for recruitment, screening, hiring, retention or advancement purposes of their employees.

**Careers:** Careers are occupations which usually require special training or formal education.

## Workplace Learning Opportunities

Unit 5 high school students have multiple opportunities to earn credit outside of the classroom in a local business or non-profit organization. These experiences allow students to experience a professional work environment and may assist with skill development and career selection. Some of the following experiences are unpaid, while others are paid experiences. Students should consult their counselors if additional information is needed.

**Work Program (11, 12)** This course enables students to develop and refine occupational competencies needed to acquire and succeed in a job, adjust to the employment, and advance in an occupation of their choice. On-the-job instruction is supervised by the employer. They work closely with the teacher-coordinator in planning student learning experiences, which are compatible with student goals. Students are required to work an average of 15 hours a week.

**Internship Program (12)** This program is designed for career exploration or validation. The student will solicit and find a local business or non-profit organization for their internship. The internship will be in a place aligned with student's career interests. Essential career skills will be correlated with soft skills and academic skills in a project based format. The student will be released Monday - Thursday during their internship period(s) to intern with their mentor in an unpaid position and an average of four hours per week ( $\frac{1}{2}$  credit) or eight hours per week (1 credit). Every Friday the student will participate in Internship Seminars during the practicum period(s).

**Innovative Entrepreneurs (12)** This class is a year-long experience that engages students in startup business development and processes, and creates meaningful connections with local business owners and innovators. Students will visit local businesses, partner with a business mentor, learn from guest speakers, develop their own business idea and pitch their idea to local business owners and entrepreneurs at the end of the year. This is a blocked course - it meets for two hours each day. Students must apply and go through an interview as part of the course selection process.

**Training Site 1 & Training Site 2 - VTAP (11, 12)** This hands on experience is offered in combination with a Vocations course. A variety of training sites (local businesses/non-profits) host VTAP students. Training sites are created for the purpose of providing the student with an overall work experience and skills that would be transferable to any job. Training sites include, but are not limited to, vocational training center, on-campus sites, and community sites. Training sites are assigned by the Vocational Coordinator.

## College Admission Requirements

The following general guidelines may be helpful to you in your academic planning. Students should check college websites for specific requirements.

	<b>Unit 5 Grad Requirements</b>	<b>State University Requirements</b>	<b>Out-of-State University &amp; Private Colleges</b>	<b>Community Colleges &amp; Vocational</b>	<b>Highly Selective Colleges</b>
<b>English</b>	4 years	4 years w/emphasis on written and oral communication and literature	4 years	4 years	4 years
<b>Math</b>	3 years; 1 Algebra and 1 w/Geo content	3 years Algebra, Geometry, Algebra II (or Trig)	2 - 4 years Algebra, Geometry, Algebra II, Trigonometry	2 - 3 years	4 years recommend through Calculus
<b>Science</b>	2 years	3 years recommended; Biology Chemistry Physics	2 - 4 years recommended; Biology Chemistry Physics	2 - 3 years	4 years recommended; Biology Chemistry Physics
<b>Social Science</b>	2 years including semester of Civics	3 years emphasis on history and government	2 - 4 Years	2 - 3 Years	3 - 4 Years
<b>World Languages</b>	0 years	2 years at some schools	2 - 4 years at some schools	0 - 2 years	3 - 4 years

\*University of Illinois requires two years of world languages.

\*\*All Illinois state universities require two years of world languages, art, music or technology.

## Honors, Dual Credit & Advanced Placement Courses

Department	Honors	Dual Credit	Advanced Placement
<b>English</b>	Honors English I Honors English II	Composition I & II Intro to Humanities Oral Communication	AP English Literature AP English Language
<b>Family &amp; Consumer Science</b>		Educating Young Children II Intro to Education	
<b>Foreign Language</b>			AP Spanish AP German AP French
<b>Math</b>	Honor Geometry Honors Algebra II Honors Pre-Calculus	Finite Math Statistics	AP Computer Science Principles AP Computer Science (JAVA) AP Statistics AP Calculus AB AP Calculus BC
<b>Music</b>			AP Music Theory
<b>Science</b>	Honors Biology Honors Chemistry	Chemistry Environment Earth	AP Biology AP Chemistry AP Physics
<b>Social Studies</b>		Western Civilization to 1500 Western Civilization Since 1500	AP Psychology AP Government & Politics U.S. AP Human Geography AP Comparative Government

## Core Curriculum

### English

**Year 1** English I/Honors  
**Year 2** English II/Honors  
**Year 3** English III, AP Language  
**Year 4** English Elective, AP Literature

### Math

Algebra, Geometry, Honors Geometry  
 Geometry/Honors, Algebra II/Honors  
 Algebra II, Pre-Calculus, Honors Algebra II, DC  
 /DC Pre-Calculus, AP Calculus, Math Electives, DC

### Science

**Year 1** Biology/Honors  
**Year 2** Chemistry/Honors  
**Year 3** Physics, Science Electives, DC  
**Year 4** Electives, AP Courses, DC

### Social Studies

Pre AP  
 U.S. History  
 Civics, SS Elective, DC  
 Electives, AP Courses, DC

## Unit 5 Minimum Graduation Requirements

### NUMBER OF CREDITS TO GRADUATE

ENGLISH ..... 4.0  
 MATH ..... 3.0\*  
 SCIENCE ..... 2.0  
 SOCIAL STUDIES ..... 2.0\*\*  
 PHYSICAL EDUCATION/HEALTH . 3.5\*\*\*  
 CONSUMER EDUCATION ..... 0.5\*\*\*\*  
 ELECTIVES ..... 9.0  
 TOTAL ..... 24.0

*Completion of SAT Test (11<sup>th</sup> grade)*

*Completion of FAFSA (12<sup>th</sup> grade)*

### **\*MATH**

1.0 credit Algebra I content  
 1.0 Math credit can come from AP Computer Science courses

**\*\*SOCIAL STUDIES**

1.0 credit U.S. History

0.5 credit Civics Requirement

Successful completion of Constitution Test

**\*\*\*PHYSICAL EDUCATION & HEALTH**

Students are required to enroll in PE every semester they are in school. Juniors and Seniors may be exempt from physical education if they qualify under the Board of Education guidelines:

**\*\*\*\*CONSUMER EDUCATION - STATE OF ILLINOIS REQUIREMENT**

Successful completion of any of the following courses/programs fulfills the State Consumer Education requirement for high school graduation:

- Introduction to Business Course (9, 10) 2 semesters
- Consumer Education course (11, 12) 1 semester
- Work Program Class
- Personal Investment & Finance course (11, 12) 1 semester
- Agribusiness Management course (11, 12) 2 semesters
- Consumer Math
- Vocations I or Vocations II (for students with a case manager)

**Suggested College Admission Sequence**

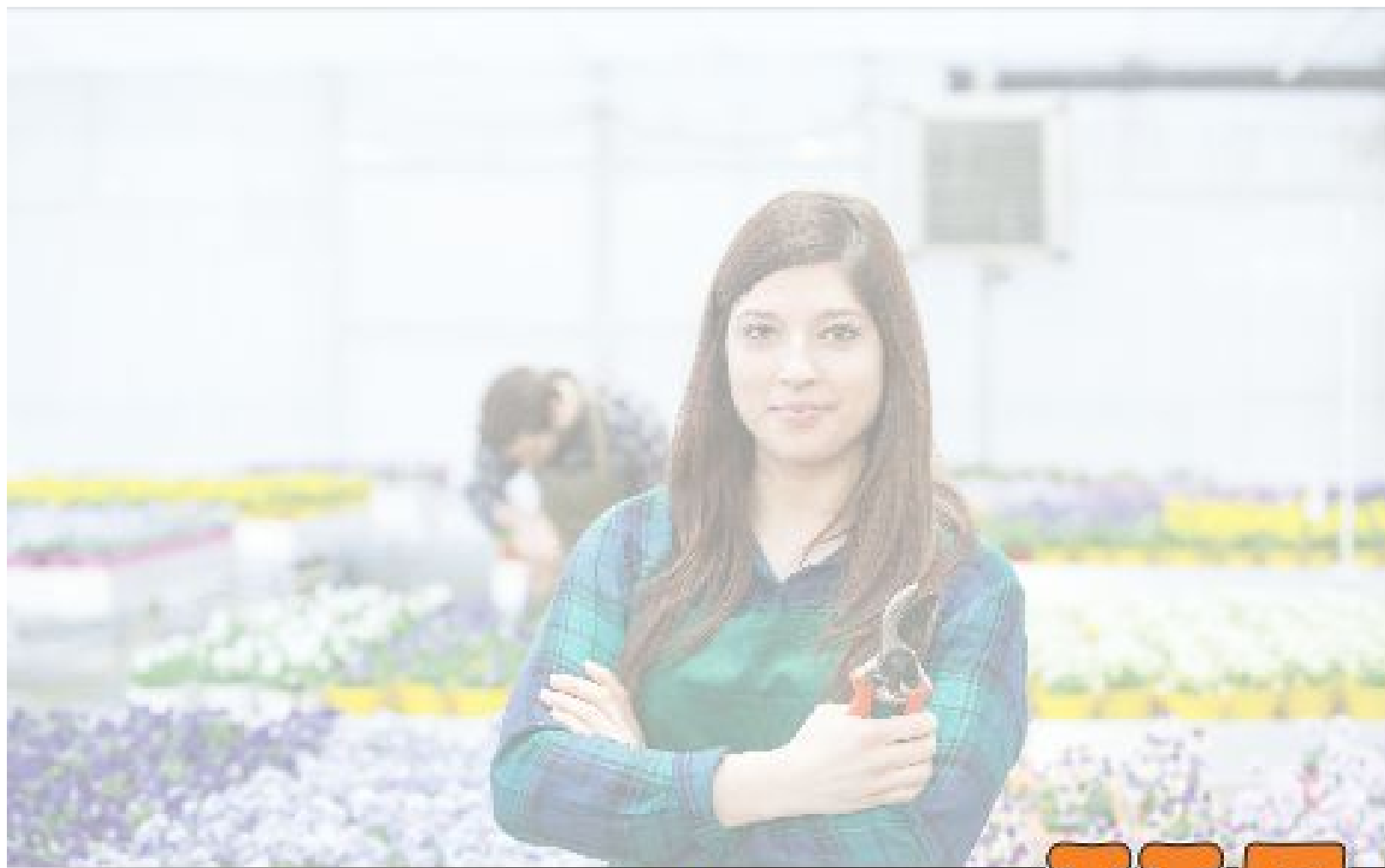
English 4.0 credits

Math 3.0 - 4.0 credits

Science 3.0 - 4.0 credits

Social Studies 3.0 - 4.0 credits

Foreign Language/Fine Arts 2.0 - 4.0 credits



Agriculture, Food & Natural Resources

**U5**



## **Agriculture, Food & Natural Resources**

*The Agriculture, Food, and Natural Resources Career Cluster prepares learners for careers in the planning, implementation, production, management, processing, and/or marketing of agricultural commodities and services, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products. It also includes related professional, technical, and educational services.*

<b>Pathways</b>	Animal Systems, Natural Resource Systems, Agribusiness Systems, Plant Systems, Environmental Service Systems, Power Structural & Technical Systems, Food Products & Processing Systems
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<b>Careers</b>	<b><u>Certification/Associates Degree:</u></b>			
	Animal Control Officer	Environmental Technician	Genetic Technologist	Quality Food Control Specialist
	Arborist	Farrier	Golf Course Manager	Recycling Technician
	Bio-Teach Lab Technician	Feed Sales Representative	Greenhouse Manager	Veterinary Technician
	Botanist	Fish and Game Officer	Landscape Designer	
	Crop/Livestock Farmer	Forestry Technician	Poultry Farm Supervisor	
	<b><u>Bachelors or Higher Degree:</u></b>			
	Agricultural & Food Scientist	Conservation Scientists & Foresters	Geneticist	Plant Pathologist
	Agricultural Commodities Broker	Ecologist	Greenhouse Operator	Soil Geologist
	Agricultural Educator	Entomologist	Health & Safety Sanitarian	Toxicologist
	Agricultural Engineer	Env. Compliance-Assurance	Horticulturist	USDA Inspector
	Animal Husbandry	Environmental Engineer	Livestock Geneticist	Veterinarian
	Aqua-culturalist	Fish and Game Warden	Livestock Management	Wildlife Biologist
	Biochemist	Forester	Marine Biologist	Zoologist

<b>Unit 5 Recommended Pathway Courses</b>	<u>Agriculture &amp; Natural Resource Systems</u> Year 1 - Intro to Agriculture, Food, & Natural Resources Year 2 - Agricultural Science (BSAA 1 & 2 or PSAA 1 & 2) Year 3 - Agribusiness Management, Veterinary Science, or Agricultural Mechanical Technology Year 4 - Agricultural Mechanical Technology or Agribusiness Management
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<b>Related Electives</b>	Biological Science Applications in Plant Science & Animal Science, Veterinary Science, Biological Engineering, Probability & Statistics, Dual Credit or AP Statistics, Economics, Innovative Entrepreneurs, Internship
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<b>School Related Activities</b>	Bass Fishing Club, FFA, FCCLA, Speech Team
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<b>College &amp; University Majors</b>	Animal Health & Nutrition, Agricultural Animal Services, Equestrian Studies, Dairy Science, Animal Sciences
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<b>Heartland Certifications</b>	Veterinary Assistant
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<b>Unit 5 Recommended Pathway Courses</b>	<u>Food Products &amp; Processing</u> Year 1 - Culinary Arts I and II or Intro to Agriculture, Food, & Natural Resources Year 2 - Culinary Arts I and II or Intro to Agriculture, Food, & Natural Resources Year 3 - BACC Culinary Arts I Year 4 - BACC Culinary Arts II, Work Program, Internship, or Innovative Entrepreneurs
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<b>Related Electives</b>	Intro to Business, Accounting, Probability & Statistics, Dual Credit or AP Statistics, Economics
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<b>School Related Activities</b>	Bass Fishing Club, Skills USA, FCCLA, Garden Club, FFA, Speech Team
<b>College &amp; University Majors</b>	Agricultural and Food Products Processing, Agricultural Business and Management, Agricultural Business Technology, Agricultural/Farm Supplies Retailing and Wholesaling, Food Science, Food Technology and Processing
<b>High School Certifications</b>	Sanitation Certification
<b>Heartland Certifications</b>	Illinois Food Service Sanitation Manager



Architecture & Construction

**U5**



## Architecture & Construction

The Architecture and Construction cluster prepares individuals for careers in designing, planning, managing, building, and maintaining the built environment. Individuals pursuing a career in the Architecture and Construction cluster work on new structures, restorations, additions, alterations, and repairs.

Pathways	Design/Pre-Construction, Construction Pathway, Maintenance/Operations			
Careers	<b><u>Certification/Associates Degree:</u></b>			
	Architectural Drafter	Drywall Installer	HVAC Technician	Project Inspector
	Bricklayer	Electrician	Painter	Roofer
	Carpenter	Electronic Systems Technician	Paper Hanger	Sheet Metal Worker
	Cement Mason	Equipment Material Manage	Pipefitter	Tile and Marble Setter
	Construction Foreman/Manager	General Contractor / Building	Plasterer	Civil Engineering Technician
		Glazier	Plumber	Electrical Engineering Technician
	<b><u>Bachelors or Higher Degree:</u></b>			
	Architect	Electrical Engineer		
	CAD Designer	Grounds Supervisor		
	Civil Engineer	Interior Design		
	Cost Estimator	Landscape Architect		
	Demolition Engineer			

<b>Unit 5 Recommended Pathway Courses</b>	<u>Architecture</u> Year 1 - Introduction to Engineering Year 2 - Principles of Engineering Year 3 - Civil Engineering and Architecture Year 4 - Internship, Innovative Entrepreneurs, or STEM Capstone
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<b>Related Electives</b>	Interior Design I & II, AP Calculus and AP Statistics, Drawing and Painting I & II, Materials Application & Process, Manufacturing Technology, Advanced Metals, Machine Operations
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<b>School Related Activities</b>	Athletics, Skills USA, Tech Club, STEM Club, Speech Team
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<b>College &amp; University Majors</b>	Architectural Drafting , Architectural Engineering , Architecture , CAD/CADD Drafting Technician , Civil Drafting and Civil Engineering , Drafting/Design Engineering Technicians , Electrical/Electronic Drafting , Electrical/Electronic CAD/CADD , Environmental Design/Architecture , Mechanical Drafting CAD/CADD
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<b>Heartland Certifications</b>	Industrial Technology (Welding, Construction, Design & Fabrication, Facilities Maintenance, Industrial Maintenance, Renewable Energy, and Electronics)
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<b>Unit 5 Recommended Pathway Courses</b>	<u>Construction</u> Year 1 - Materials Applications & Process Year 2 - Manufacturing Technology and Advanced Metals Year 3 - BACC Construction I or Machine Operations and Cabinetmaking Year 4 - BACC Construction I or II
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<b>Related Electives</b>	Business Management, Geometry in Construction, STEM Trig, Graphic Design I & II
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<b>School Related Activities</b>	Athletics, Skills USA, Tech Club, Drama Club (Stage Crew)
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<b>College &amp; University</b>	Building/Construction Management , Construction Engineering Technology , Energy Management and
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<b>Majors</b>	Systems Technology , Heating, Air Conditioning and Refrigeration Technology
<b>High School Certifications</b>	OSHA 10
<b>Heartland Certifications</b>	Industrial Technology (Welding, Construction, Design & Fabrication, Facilities Maintenance, Industrial Maintenance, Renewable Energy, and Electronics)



Arts, A/V Technology & Communications

**U5**



## Arts, A/V Technology, & Communications

*Individuals pursuing a career in the Arts, Audio/Video Technology & Communications cluster are offered two different avenues of concentration. Careers in the Performing Arts, Visual Arts or certain aspects of Journalism, Broadcasting and Film require courses and activities that challenge students' creative talents, while careers in Audio-Video Communications Technology, Telecommunications or Printing Technology require strong backgrounds in computer and electronic-based technology and a solid foundation in math and science. In addition, the creative aspects of this cluster are rapidly merging with the technological, making it even more challenging*

<b>Pathways</b>	Audio & Video Technology and Film Printing Technology, Journalism & Broadcasting, Visual Arts, Performing Arts, Telecommunications
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<b>Careers</b>	<b><u>Certification/Associates Degree:</u></b>			
	Animator	Printing Press Operator	Video Systems Technician	Graphic Designer
	Dancer	Public Relations Manager	Artist	Musical instrument Technician
	Audio-Video System Service Technician	Musician	Sculptor	Bookbinder
	Photographer	Sign Painter	Broadcast Technician	Prepress Technician
	Technical Computer Support			
	<b><u>Bachelors or Higher Degree:</u></b>	Costume & Scenic Designer	Music Therapist	Actor
	Artistic Director	Audio Systems Technician	Dancer	Prop Crafts Artisan
	Animator	Audio-Visual Designer & Engineer	Graphic Designer	Recording Engineer
	Art Professor	Cinematographer	Illustrator	Set Designers
	Art Therapist	Composer	Journalist	Videographer
	Artist	Copy Editor	Music Teacher	Videographer: Special Effects

<b>Unit 5 Recommended Pathway Courses</b>	<u>Audio &amp; Visual Technology</u> Year 1 - Technology Concepts Year 2 - Animation & Rendering Year 3 - Digital Media Production Year 4 - Advanced Digital Media Production
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<b>Related Electives</b>	Theater I, Theater II, Advanced Acting & Directing, Creative Writing, Lit of the Silver Screen, Graphic Design I & II, Photography I & II, Journalism, Yearbook
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<b>School Related Activities</b>	Art Club, Film Club, Tech Club, Speech Team, Drama Club
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<b>College &amp; University Majors</b>	Art History, Criticism and Conservation , Audiovisual Communications Technologies/ Technicians , Computer Graphics , Design and Visual Communications, General , Drawing , Film/Video and Photographic Arts , Fine/Studio Arts , Intermedia/Multimedia , Museology/Museum Studies , Photography
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<b>Heartland Certifications</b>	Communication Graphics, Web Design Skills, Web Media Designer, Digital Imaging, and Digital Media Communication Core
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<b>Unit 5 Recommended Pathway Courses</b>	<u>Visual Arts</u> Year 1 - Drawing & Painting I and II or Ceramics & Sculptures I and II Year 2 -Drawing & Painting I and II , Ceramics & Sculptures I and II, or Advanced Art Studio I Year 3 - Advanced Art Studio I / II , Graphic Design I & II , Photography I & II Year 4 - Advanced Art Studio I / II , Graphic Design I & II , Photography I & II
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<b>Related Electives</b>	Theater I & II, Advanced Acting & Directing, Introduction to the Humanities, Innovative Entrepreneurship, Fashion I, II, and III, Contemporary Crafts, Animation & Rendering
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<b>School Related Activities</b>	Art Club, FCCLA, Film Club, Photography Club, Thespians, Drama Club, Speech Team
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<b>College &amp; University Majors</b>	Advertising Art Direction , Arts Administration , Art Education , Art History , Fine Arts , Illustration , Interior Design , Visual Arts
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<b>Heartland Certifications</b>	Communication Graphics, Web Design Skills, Web Media Designer, Digital Imaging, and Digital Media Communication Core
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<b>Unit 5 Recommended Pathway Courses</b>	<u>Communications/Journalism &amp; Broadcasting</u> Year 1 - Intro to Business or Computer Applications I and II Year 2 - Journalism I or Web Page Design Year 3 - Dual Credit Intro to Oral Communication or Journalism II Year 4 - Journalism II
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<b>Related Electives</b>	AP English Language & Composition, AP English Literature & Composition; Dual Credit Composition I & II, Theater I & II, Advanced Acting & Directing, Creative Writing, Yearbook, Graphic Design I & II, Foreign Language, Digital Media Production, Advanced Digital Media Production
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<b>School Related Activities</b>	Speech Team, Foreign Language Clubs, Drama Club
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<b>College &amp; University Majors</b>	English, Creative Writing, Communications, Professional Writing, Linguistics
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<b>Heartland Certifications</b>	Communication Graphics, Web Design Skills, Web Media Designer, Digital Imaging, and Digital Media Communication Core
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<b>Unit 5 Recommended Pathway Courses</b>	<u>Performing Arts/Musician</u> - Successful progression through the advanced levels of Band/Choir/Orchestra - AP Music Theory, Music Theory II: Arranging and Composition
<b>Related Electives</b>	Additional Band/Choir/Orchestra, study of secondary instruments, American Popular Music, and other areas of study based on intended major (possible science, drama, business courses, etc.); Possible foreign languages (for vocalists and/or depending on postsecondary education plans)
<b>School Related Activities</b>	Marching Band, Color Guard, Jazz Bands, Chamber Ensembles, Vocal Jazz, A Capella Groups, Madrigals, Court Singers, String Quartets, Madrigal Strings, Musical Pit Orchestra, Tri-M Music Honor Society, Drama Club, Musical
<b>Other Activities</b>	Private Lessons, ILMEA Auditions/All-District/All-State, community ensembles such as Bloomington-Normal Youth Symphony, String Project/College Preparatory Programs, performances at IHSA Solo and Ensemble Contest
<b>College &amp; University Majors</b>	Music Performance (vocal and instrumental), Music Education, Musical Theater/Lyric Theater, Music History/Musicology, Music Composition, Film Scoring, Computer Science and Music, Music Business/Arts Administration, Jazz Studies, Commercial Music, Music Therapy, Audio or Acoustical Engineering, Music and Worship, Singer/Songwriter, Ethnomusicology



Business Management

**U5**



## **Business Management & Administration**

*The Business Management and Administration Cluster prepares learners for careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Career opportunities are available in every sector of the economy and require specific skills in organization, time management, customer service and communication.*

<b>Pathways</b>	General Management, Business Information Management, Human Resources Management, Operations Management, Administrative Support
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<b>Careers</b>	<b><u>Certification/Associates Degree:</u></b>			
	Small Business Owner	Event Planner	Office Manager	Administrative Assistant
	Funeral Director	Personnel Recruiter	Wholesale and Retail Buyer	Accountant
	Code Compliance Officer	Hospital Admitting Clerk	Retail Sales Supervisor	Court Reporter
	Industrial Clerk Sales Representative	Entrepreneur	Medical Transcriptionist	
	<b><u>Bachelors or Higher Degree:</u></b>			
	Theater Manager	E-Commerce Analyst	Marketing Analyst	Travel Agency Manager
	Advertising Manager	Facilities Manager	Marketing Manager	Auditor
	Health Care Administrator	Public Relations Manager	Business & Industry Consultant	Human Resource Manager
	Sales Representative	Certified Public Accountant	Instrument Sales/Manufacturing	Sports Management
	Corporate Trainer	Investment Executive		

<b>Unit 5 Recommended Pathway Courses</b>	<u>Business Management &amp; Administration</u> Year 1 - Introduction to Business Year 2 - Accounting or Business Law and Sports & Entertainment Marketing Year 3 - Advanced Accounting , Business Management , or Agribusiness Management Year 4 - Innovative Entrepreneurs or Internship
<b>Related Electives</b>	Personal Investment & Finance, Computer Applications I & II, Graphic Design I/II, Dual Credit Intro to Communications, AP Calculus, Dual Credit or AP Statistics, Economics
<b>School Related Activities</b>	Key Club, Interact Club, Mock Trial, Future Business Leaders of America, FCCLA, Student Council, Black Student Union, Class Board, Speech Team
<b>College &amp; University Majors</b>	Accounting , Business Administration and Management , Business Management/Economics , Entrepreneurial and Small Business Operations , Human Resources Management , Logistics , Management Information Systems , Office Management and Supervision , Public Relations/Advertising/ Applied Communications
<b>Heartland Certifications</b>	Accounting Foundations, Small Business Management, and Business Technology (Administrative Assistant Training and Office Manager)



Education & Training

U5



## Education & Training

*This diverse Career Cluster prepares learners for careers in planning, managing and providing education and training services, and related learning support services. Millions of learners each year train for careers in education and training in a variety of settings that offer academic instruction, career and technical instruction, and other education and training services.*

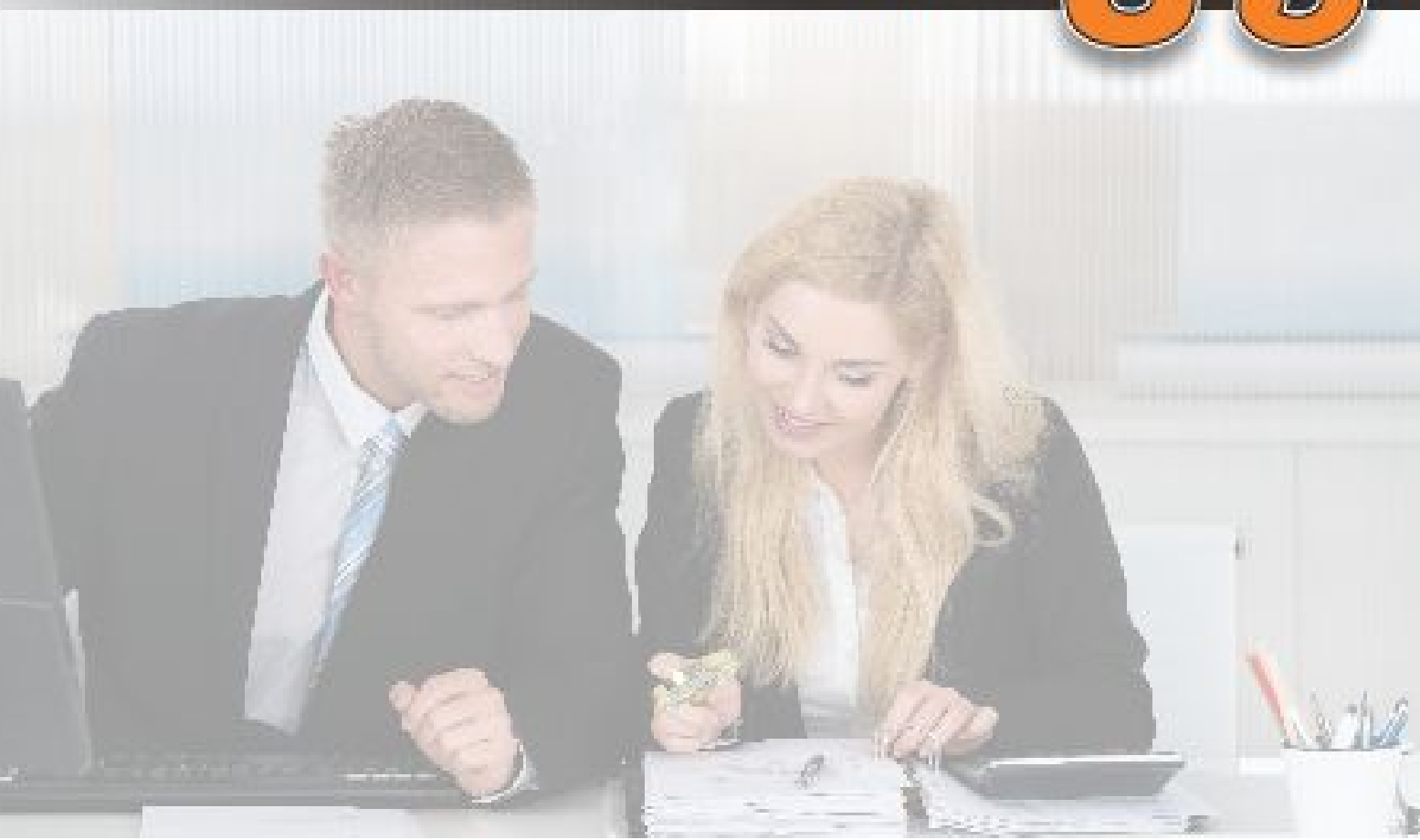
Pathways	Administration & Administrative, Support Teaching / Training, Professional Support Services			
Careers	<b>Certification/Associates Degree:</b>			
	Child Care Assistant	Library Technician	Preschool Teacher	Sign Language Interpreter
	Teacher Assistant			
	<b>Bachelors or Higher Degree:</b>			
	Educational Administrator	College/University Faculty	Librarian	Teacher of the Blind
	Kindergarten Teacher	Middle School Teacher	Speech-Language Pathologist	Adult Literacy Teacher
	Curriculum Developer	Music Teacher	University Professor	Assessment Specialist
	Elementary School Teacher	School Counselor	Bilingual Educator	High School Teacher
	Career & Technical Education Teacher	Instructional Coordinator	Special Education Teacher	Clinical Psychologist
Unit 5 Recommended Pathway Courses	<u>Education &amp; Training</u> Year 1 - Child Development Year 2 - Educating Young Children I or Parenting Year 3 - Dual Credit Intro to Education or Educating Young Children II Year 4 - Internship			

<b>Related Electives</b>	Psychology, AP Psychology, Sociology, Business Management, Innovative Entrepreneur
<b>School Related Activities</b>	Black Student Union, Peer Leadership/Mentoring, Key Club, Interact, FBLA, FCCLA, Speech Team, Best Buddies, PRIDE/GSA
<b>College &amp; University Majors</b>	Library Science , Multicultural/ESL Education, Primary Education, School Administration , School Counseling, Secondary Education , Special Education, Sport and Fitness Management
<b>High School Certifications</b>	Gateways to Opportunity Level I Credential
<b>Heartland Certifications</b>	Early Childhood Education Level 2 Credential and Early Childhood Education Infant-Toddler Level 2 Credential



Finance

**U5**



## Finance

The Finance Cluster prepares learners for careers in financial and investment planning, banking, insurance and business financial management. Career opportunities are available in every sector of the economy and require specific skills in organization, time management, customer service and communication.

Pathways	Accounting, Insurance, Banking Services, Securities and Investments, Business Finance			
Careers	<b>Certification/Associates Degree:</b>			
	Accountant	Insurance Agent	Bill & Account Collector	Investigator & Adjustor
	Loan Officer	Claim Adjuster	Brokerage Clerk	Personal Property Appraiser
	Financial Institution Manager	Underwriter		
	<b>Bachelors or Higher Degree:</b>			
	Tax Examiner	Stockbroker	Abstractor	Controller
	Insurance Underwriter	Commodities Broker	Actuary	Credit Analyst
	Auditor	Treasurer	Credit Card Operations Manager	Certified Public Accountant
	Investment Advisor	Brokerage Clerk	Economist	Real Estate Appraiser
	Business & Industry Consultant	Financial Advisor	Foreign Exchange Manager	School District Business Manager
Unit 5 Recommended Pathway Courses	<u>Finance/Accounting</u> Year 1 - Introduction to Business Year 2 - Accounting Year 3 - Advanced Accounting , Personal Investment & Finance , Business Management Year 4 - Internship or Innovative Entrepreneurs			

<b>Related Electives</b>	Computer Application I & II, Economics, Dual Credit Finite Math, AP Calculus, AP Computer Science, AP Statistics, Agribusiness Management
<b>School Related Activities</b>	Math Team, Math League, Future Business Leaders of America, Speech Team
<b>College &amp; University Majors</b>	Actuarial Science , Banking and Financial Support Services , Business and Personal/Financial Services , Marketing Operations , Credit Management , Financial Planning Services , Insurance , International Finance , Investments and Securities
<b>Heartland Certifications</b>	Accounting Foundations



Government & Public Administration

**U5**



## **Government & Public Administration**

*Government affects Americans in countless ways. In a democratic society, government is the means of expressing the public will. This includes a variety of activities. In fact, virtually every occupation can be found within government. There are, however, some activities that are unique to government. The federal government defends us from foreign aggression; represents American interests abroad; deliberates, passes, and enforces laws; and administers many different programs. State and local governments pass laws or ordinances and provide vital services to constituents. There are many opportunities in government in every career area. The Government and Public Administration Career Cluster focuses on those careers that are unique to government and not contained in another Career Cluster.*

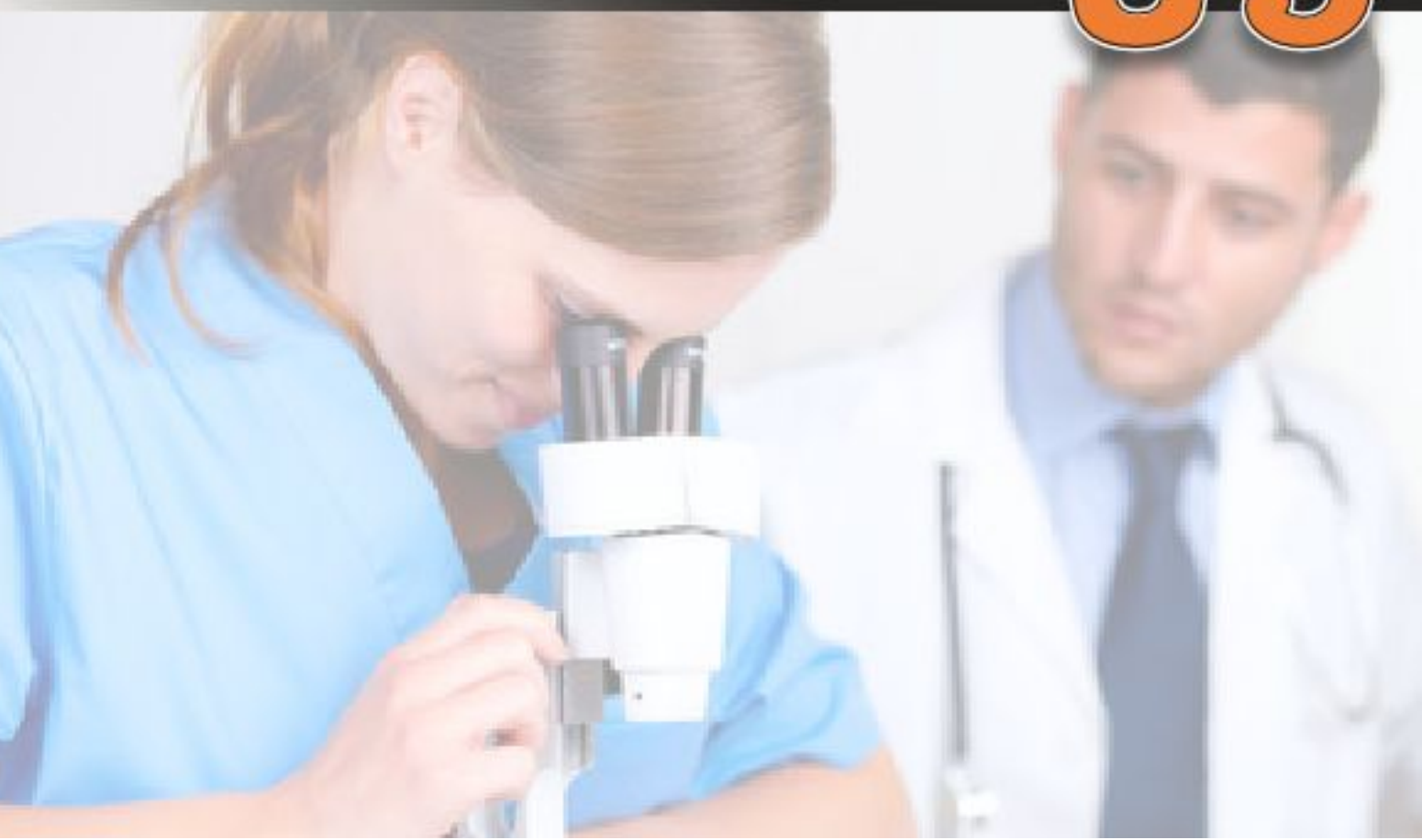
Pathways	Foreign Service, Public Management & Administration, Governance, Regulation, National Security, Revenue & Taxation Planning			
Careers	<b><u>Certification/Associates Degree:</u></b>			
	Accountant	County Assessor	Special Forces	Association Executive
	Election Supervisor	Title Examiner	Building Inspector	Infantry Forces
	Transportation Inspector	City Planning Aide	Peace Corp. Volunteer	Coroner
	Postmaster			
	<b><u>Bachelors or Higher Degree:</u></b>			
	City Manager	Immigration Officer	Public Utilities Manager	Accountant
	Ambassador	Commissioner	Infantry Officer	Social Services Administrator
	Cryptographer	Intelligence Analyst	Special Operations Officer	Dean of Students
	Occ. Health/Safety Specialist	Translator/Interpreter	Attorney	Emergency Mgmt. Specialist
	National Security Advisor	Urban Planner	Aviation Security Specialist	Equal Opportunity Specialist

<b>Unit 5 Recommended Pathway Courses</b>	<u>Public Management &amp; Administration/Governance</u> Year 1 - Pre-Ap World History & Geography Year 2 - Civics Year 3 - Economics and International Relations Year 4 - AP Comparative Government and AP Government & Politics and/or Internship
<b>Related Electives</b>	Computer Applications I & II, Finite/Probability & Statistics, AP Statistics, Social Issues, Psychology, AP Psychology, Sociology, Human Geography, AP Human Geography, Accounting, Advanced Accounting, Entrepreneurship/Internship, Agribusiness Management
<b>School Related Activities</b>	School Related Activities: Speech Team, Student Council, Black Student Union, Mock Trial, Impact West, FED Challenge, Social Studies Club, Model UN, Class Board
<b>College &amp; University Majors</b>	American Government and Politics , City/Urban, Community and Regional Planning, Political Communication, Political Science and Government , Public Administration, Public Policy Analysis , Urban Studies/Affairs



Health Sciences

**U5**



## Health Science

*The Health Science Career Cluster orients students to careers that promote health, wellness, and diagnosis as well as treat injuries and diseases. Some of the careers involve working directly with people, while others involve research into diseases or collecting and formatting data and information. Work locations are varied and may be in hospitals, medical or dental offices, laboratories, or within larger businesses the community.*

Pathways	Biotechnology Research & Development, Support Services, Diagnostic Services, Therapeutic Services, Health Informatics			
Careers	<b>Certification/Associates Degree:</b>			
	Radiology Technologist	Dialysis Technician	Medical Assistant	Registered Nurse
	Anesthesiologist Assistant	EMT/Paramedic	Medical Transcriptionist	Respiratory Therapist
	Certified Nursing Assistant	Home Health Aide	Occupational Therapy Asst.	Surgical Technician
	Clinical Medical Assistant	Hospital Admitting Clerk	Pharmacy Technician	Ultrasound Technician
	Dental Assistant	Licensed Practical Nurse	Physical Therapist/Asst.	Unit Coordinator
	Dental Hygienist	Massage Therapist		
	<b>Bachelors or Higher Degree:</b>			
	Surgeon	Dietician Medical	Librarian/Cybrarian	Physician (MD/DO)
	Anesthesiologist	Epidemiologist	Music Therapist	Psychologist
	Athletic Trainer	Ethicist	Nurse Practitioner	Registered Health Information Mgr.
	Audiologist	Exercise Physiologist	Occupational Therapist	Social Worker
	Chiropractor	Geneticist	Optometrist	Speech Language Pathologist
	Dentist	Health Care Administrator	Pharmacist	

<b>Unit 5 Recommended Pathway Courses</b>	<u>Health Science - Therapeutic &amp; Support Services</u> Year 1 - Core Classes Year 2 - BACC Health Careers & Medical Terminology Year 3 - Physics and BACC Nurse Assistant or Veterinary Science & Technology Year 4 - AP Science and BACC Advanced CNA or Internship
<b>Related Electives</b>	Child Development, Psychology, AP Psychology, Sociology, Chemistry II, Dual Credit Chemistry, Biological Engineering, Molecular & Structural Biology, AP Biology, AP Chemistry, Honors Pre-Calculus, AP Calculus, AP Statistics, Lifestyle Management, Foreign Language, Accounting
<b>School Related Activities</b>	Skills USA, Cadaver Lab
<b>College &amp; University Majors</b>	Biotechnology , Community Health and Preventive Medicine , Dentistry , Emergency Medical Technology/Technician , Health Informatics/Medical Records Administration , Medicine , Nursing , Pharmacy
<b>High School Certifications</b>	HIPAA, Certified Nursing Assistant, CPR & AED
<b>Heartland Certifications</b>	Nursing Assistant, Practical Nursing, EMT Basic, and EMT Paramedic



Hospitality & Tourism

**U5**



## Hospitality & Tourism

The Hospitality & Tourism Cluster prepares learners for careers in the management, marketing and operations of restaurants and other food service, lodging, attractions, recreational events and travel-related services. Hospitality operations are located in communities throughout the world.

<b>Pathways</b>	Lodging, Travel & Tourism, Recreation-Amusements & Attractions, Restaurants and Food/Beverage Services
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<b>Careers</b>	<b><u>Certification/Associates Degree:</u></b>			
	Reservations Manager	Baker and Pastry Assistant	Club Manager	Food Service Supervisor
	Restaurant Owner / Manager	Bartender	Concierge	Motel and Hotel Manager
	Tour and Travel Guide	Casino Manager	Conference Planner	Promoter (sports, music, etc.)
	Travel Agent	Caterer	Convention Services Manager	Recreation Director
	Wine Steward	Chef	Facilities Manager	
	<b><u>Bachelors or Higher Degree:</u></b>			
	Theme Park Management	Director of Operations	Musicians Agent	Translator/Interpreter
	Director of Tourism	Recreation Director	Event Planner	Resort Manager
	Executive Chef	Theatre Manager	Museum Director	

<b>Unit 5 Recommended Pathway Courses</b>	<u>Restaurants and Food/Beverage Services</u> Year 1 - Culinary Arts I and Culinary Arts II Year 2 - Lifestyle Management Year 3 - BACC Culinary Arts I Year 4 - BACC Culinary Arts II and Internship/Work Program
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<b>Related Electives</b>	Business Management, Innovative Entrepreneurs, Internship, Foreign Language, Intro to Agriculture Food and Natural Resources, Economics, Digital Media Production, Graphic Design I/II, Dual Credit Intro to Communications, Journalism, Foreign Language
<b>School Related Activities</b>	FCCLA, Speech Team, Foreign Language Clubs, FBLA
<b>College &amp; University Majors</b>	Baking and Pastry Arts/Baker/Pastry Chef, Cooking and Related Culinary Arts, General, Culinary Arts/Chef Training, Hotel Administration/Management, Restaurant/Food Services Management
<b>High School Certifications</b>	Sanitation
<b>Heartland Certifications</b>	Illinois Food Service Sanitation Management
<b>Unit 5 Recommended Pathway Courses</b>	<u>Recreation, Amusements &amp; Attractions</u> Year 1 - Introduction to Business Year 2 - Computer Applications I & II Year 3 - Business/Web Design/Agribusiness Management Year 4 - Business Management/Sports & Entertainment Marketing/Agribusiness Management
<b>Related Electives</b>	Intro to Oral Communication/Advanced Speech, Senior English Electives, Drawing & Painting I & II, Contemporary Crafts, Graphic Design I & II, Child Development, Biological Science Applications in Agriculture Plant & Animal, Veterinary Science, Agribusiness Management, Lifestyle Management, Entrepreneurship/Internship
<b>School Related Activities</b>	FBLA, FCCLA, FFA, Speech Team, Art Club, Photography Club, Outdoor Adventure Club, Team Unified, Best Buddies, Student Council

<b>College &amp; University Majors</b>	Culinary Arts, Facilities Planning and Management, Hospitality Administration/Management, Natural Resource Recreation and Tourism, Outdoor Education, Sports Studies
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Human Services

**U5**



## Human Services

*This diverse Career Cluster prepares individuals for employment in career pathways related to families and human needs.*

<b>Pathways</b>	Early Childhood Development & Services, Personal Care Services, Counseling & Mental Health Services, Consumer Services, Family & Community Services
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<b>Careers</b>	<b><u>Certification/Associates Degree:</u></b>			
	Home Health Aide	Early Childhood Teacher	Law Enforcement Officer	Child Care Assistant
	Esthetician	Massage Therapist	Community Service Director	Emergency and Relief Worker
	Personal Fitness Trainer	Consumer Advocate	Fire Fighter	Skin Care Specialist
	Cosmetologist	Funeral Director	Director of Childcare Facility	
	<b><u>Bachelors or Higher Degree:</u></b>			
	Vocational Rehab Counselor	Dietician	Alcohol & Drug Abuse Counselor	Hospice Worker
	School Counselor/Psychologist	Career Counselor	Music Therapist	Social Worker
	Psychiatrist	Clergy	Psychologist	Certified Financial Planner
	Caseworker	Probation Officer	Sociologist	

<b>Unit 5 Recommended Pathway Courses</b>	<u>Early Childhood Development &amp; Services</u> Year 1 - Child Development Year 2 - Educating Young Children I and Parenting Year 3 - Educating Young Children II or Dual Credit Intro to Education Year 4 - Internship
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<b>Related Electives</b>	Psychology, AP Psychology, Personality Behavior and Relationships, Foreign Language, Sociology, Business Management, Innovative Entrepreneurs
<b>School Related Activities</b>	FCCLA, Student Council, Black Student Union, Key Club, Foreign Language Clubs, Class Board, Speech Team, FBLA, Best Buddies, PRIDE
<b>College &amp; University Majors</b>	Early Childhood Education, Multicultural/ESL Education, Special Education, Sport and Fitness Management
<b>Heartland Certifications</b>	Early Childhood Education Level 2 Credential and Early Childhood Education Infant-Toddler Level 2 Credential
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<b>Unit 5 Recommended Pathway Courses</b>	<u>Personal Care Services</u> Year 1 - Core Classes Year 2 - BACC Cosmetology I Year 3 - BACC Cosmetology II Year 4 - BACC Cosmetology III
<b>Related Electives</b>	Business Management, Personality Behavior & Relationships, Lifestyle Management, Innovative Entrepreneurs, Internship, Accounting, Foreign Language
<b>School Related Activities</b>	Skills USA, Speech Team, Foreign Language Clubs, FCCLA, Musical
<b>College &amp; University Majors</b>	Coaching, Education, Exercise Science, Health Fitness Specialist, Kinesiology
<b>Heartland Certifications</b>	State of Illinois Cosmetology License

<b>Unit 5 Recommended Pathway Courses</b>	<u>Consumer Services - Fashion Construction</u> Year 1 - Fashion I & II Year 2 - Housing & Interior Design I and II/Fashion III Year 3 - Business Management Year 4 - Internship or Entrepreneurship
<b>Related Electives</b>	Drawing and Painting I & II, Advanced Art, Photography, Digital Photography
<b>School Related Activities</b>	FCCLA, Drama Club Tech Crew, Art Club
<b>College &amp; University Majors</b>	Apparel Technology, Textile Studies, Fashion Design, Fashion Studies, Fashion Merchandising
<b>Unit 5 Recommended Pathway Courses</b>	<u>Counseling &amp; Mental Health Services</u> Year 1 - Core Classes Year 2 - Child Development Year 3 - Psychology/AP Psychology and Personality, Behavior, & Relationships Year 4 - Sociology and Internship
<b>Related Electives</b>	Dual Credit Intro to Communications, Dual Credit Intro to Humanities, Business Management, Innovative Entrepreneurs, Internship, Personality Behavior and Relationships, Foreign Language
<b>School Related Activities</b>	Best Buddies, Team Unified, Student Council, Black Student Union, Key Club, Speech Team, Foreign Language Clubs, FCCLA,
<b>College &amp; University Majors</b>	Community Health Services , Family Counseling , Mental and Social Health Services, Psychology, Social Work, Substance Abuse/Addiction Counseling



Information Technology

**U5**



## Information Technology

IT careers involve the design, development, support and management of hardware, software, multimedia and systems integration services. The IT industry is a dynamic and entrepreneurial working environment that has a revolutionary impact on the economy and society. In addition to careers in the IT industry, IT careers are available in every sector of the economy from Financial Services to Medical Services, from Business to Engineering and Environmental Services.

<b>Pathways</b>	Information Support & Services, Web and Digital Communications, Network Systems, Programming and Software Development
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<b>Careers</b>	<u>Certification/Associates Degree:</u>			
	Web Architect/Designer	Computer Support Specialist	Sound Manager	Computer Systems Analyst
	UNIX Administrator	Recording Engineer		
	<u>Bachelors or Higher Degree:</u>			
	Telecommunications Network Tech	Animator	Network Security Analyst	Data Systems Designer
	Programmer	Database Administrator	Scientific & Medical Illustrator	Illustrator
	Software Applications Specialist	Information Technology Engineer	Systems Administrator	Media Specialist
	Network Administrator			

<b>Unit 5 Recommended Pathway Courses</b>	<u>Network Systems</u> Year 1 – Computer Science Essentials Year 2 – AP Computer Science Principles Year 3 - BACC Computer Technology & Networking I or AP Computer Science Year 4 - BACC Computer Technology & Networking II
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<b>Related Electives</b>	Principles of Engineering, AP Calculus, AP Chemistry, AP Computer Science, AP Physics C, AP Statistics, Innovative Entrepreneurs, Internship, Biological Engineering, Dual Credit Environmental Science, Dual Credit Chemistry
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<b>School Related Activities</b>	IL Math League, Scholastic Bowl, Tech Club, Girls Who Code, Drama Club Tech Crew, Speech Team, FBLA, STEM Club
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<b>College &amp; University Majors</b>	Computer Engineering , Computer Information Systems , Computer Science , Information Technology , System Administration , Web Page/Multimedia
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<b>Heartland Certifications</b>	Computer Support Specialist, Computer Networking Windows, Computer Networking CISCO Academy
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<b>Unit 5 Recommended Pathway Courses</b>	<u>Programming &amp; Software Development</u> Year 1 – Computer Science Essentials Year 2 – AP Computer Science Principles Year 3 - AP Computer Science Year 4 - Internship or STEM Capstone
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<b>Related Electives</b>	Principles of Engineering, Graphic Design I & II, AP Calculus, AP Chemistry, AP Physics C, AP Statistics, Innovative Entrepreneurs, Internship, Biological Engineering, Dual Credit Environmental Science, Dual Credit Chemistry
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<b>School Related Activities</b>	IL Math League, Scholastic Bowl, Tech Club, Girls Who Code, Drama Club Tech Crew, Speech Team, FBLA
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<b>College &amp; University Majors</b>	Artificial Intelligence and Robotics , Computer Information Systems , Computer Engineering , Computer Programming , Computer Science , Information Technology , System Administration , Webpage/Multimedia
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<b>Heartland Certifications</b>	Computer Networking Windows, Computer Networking CISCO Academy
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<b>Unit 5 Recommended Pathway Courses</b>	<u>Web &amp; Digital Communications</u> Year 1 - Technology Concepts or Computer Applications I and II Year 2 - Animation Year 3 - Digital Media Production Year 4 - Advanced Digital Media Production
<b>Related Electives</b>	Business Management, Principles of Engineering, Graphic Design I & II, Innovative Entrepreneurs, Internship, AP Computer Science Principles, Photography I & II, Drawing and Painting I & II
<b>School Related Activities</b>	Math League, Scholastic Bowl, Tech Club, Girls Who Code, Drama Club Tech Crew, Speech Team, FBLA, STEM Club
<b>College &amp; University Majors</b>	Computer Engineering , Computer Information Systems , Computer Science , Information Technology , System Administration , Web Page/Multimedia
<b>Heartland Certifications</b>	Communication Graphics, Web Design Skills, Web Media Designer, Digital Imaging, and Digital Media Communication Core



Law, Public Safety, Correction and Security

**U5**



## **Law, Public Safety, Corrections, & Security**

*The Law, Public Safety, Corrections and Security Cluster helps prepare students for careers in planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.*

Pathways	Correction Services, Legal Services, Emergency & Fire Management Services, Security & Protective Services, Law Enforcement Services			
Careers	<b><u>Certification/Associates Degree:</u></b>			
	Park Ranger	Baliff	Dispatcher	Hazardous Materials Responder
	Police & Patrol Officer	Bomb Technician	Emergency Medical Tech (EMT)	Legal Administrative Assistant
	Police Canine Trainer	Copyright Law	Fire Inspector	Musician Law
	911 Operator	Court Reporter	Firefighter	Paralegal Assistant
	Criminal Investigator	Gaming Surveillance Specialist		
	<b><u>Bachelors or Higher Degree:</u></b>			
	Youth Services Worker	Emergency Management Specialist	Private Detective	Adjudicator
	FBI Agent	Probation/Parole Officer	Arbitrator	Fingerprint Examiner
	Public Information Officer	Attorney	Forensic Science Technician	Security Director
	Conservation Warden	Judge	State Patrol Officer	Correctional Officer Supervisor
	Judicial Law Clerk			

<b>Unit 5 Recommended Pathway Courses</b>	<u>Law Enforcement Services</u> Year 1 - Core Classes Year 2 - Business Law Year 3 - BACC Criminal Justice & Law Enforcement I Year 4 - BACC Criminal Justice & Law Enforcement II
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<b>Related Electives</b>	Personality Behavior & Relationships, Psychology, AP Psychology, Sociology, Intro to Logic, Foreign Language
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<b>School Related Activities</b>	Mock Trial, Speech Team, Student Council, Key Club, Social Studies Club, Black Student Union
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<b>College &amp; University Majors</b>	Corrections and Criminal Justice, Court Reporter, Forensic Science and Technology, Law, Legal Assistant/Paralegal
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<b>High School Certifications</b>	CPR & AED
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<b>Heartland Certifications</b>	Criminal Justice Corrections
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<b>Unit 5 Recommended Pathway Courses</b>	<u>Emergency &amp; Fire Management Services</u> Year 1 - Core Classes Year 2 - BACC Health Careers & Medical Terminology Year 3 - BACC Fire Science I Year 4 - BACC Emergency Medical Technician
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<b>Related Electives</b>	Business Law, Psychology, AP Psychology, Sociology, AP Biology
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<b>School Related Activities</b>	Mock Trial, Speech Team, Student Council, Black Student Union, Key Club, Social Studies Club, Cadaver Lab
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<b>College &amp; University Majors</b>	Fire Protection and Safety Technician, Fire Science/Firefighting, Fire Services Administration
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<b>High School Certifications</b>	CPR & AED, Emergency Medical Care First Responder
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<b>Heartland Certifications</b>	EMT Basic and EMT Paramedic
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<b>Unit 5 Recommended Pathway Courses</b>	<u>Legal Services</u> Year 1 - Core Classes Year 2 - Business Law Year 3 - Psychology and AP Psychology Year 4 - Internship
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<b>Related Electives</b>	AP Language, AP Literature, Sociology, AP Government & Politics, Civics, Sociology, Intro to Logic, Innovative Entrepreneurs, Foreign Language
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<b>School Related Activities</b>	Mock Trial, Speech Team, Student Council, Black Student Union, Key Club, Interact, Speech Team
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<b>College &amp; University Majors</b>	Advanced Legal Research/Studies, Court Reporter, Law, Legal Assistant/Paralegal
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Manufacturing

**U5**



## Manufacturing

*The Manufacturing Cluster prepares learners for careers in planning, managing, and performing the processing of materials into intermediate or final products. Careers also include related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.*

<b>Pathways</b>	Health, Safety & Environmental Assurance, Manufacturing Production Process Development, Logistics & Inventory Control, Production, Maintenance, Installation & Repair Quality Assurance
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<b>Careers</b>	<b><u>Certification/Associates Degree:</u></b>			
	Welding Technician	Computer Technician	Pattern & Model Maker	Logistician
	Assembler	Electric Motor Technician	Manufacturing Technician	Automated Manufacturing Technician
	Electromechanical Assembler	Mechanical Research Tech.	Quality Control Technician	Calibration Technician
	Health & Safety Representative	Medical Appliance Maker	SPC Coordinator	CMM Programmer Layout Specialist
	Industrial Machinery Mechanic	Metrology/Measurement	Tool & Die Maker	CNC Programmer / Machinist
	Nanotechnology Technician			
	<b><u>Bachelors or Higher Degree:</u></b>			
	Industrial Engineer	Apparel & Textile Manufacturing	Mechanical Engineer	Communications Operations Manager
	Musical Instrument Designer	Design Engineer	Occupational Health & Safety Inspector	Electronic Engineer
	Production Manager	Environmental Engineer	Project Engineer	

<b>Unit 5 Recommended Pathway Courses</b>	<u>Manufacturing Production Process Development</u> Year 1 - MAP Year 2 - Manufacturing Technology/Advanced Metalworking Year 3 - Cabinet Making/Machine Operations Year 4 - Internship
<b>Related Electives</b>	Introduction to Engineering, Technology Concepts, Principles of Engineering, Agriculture Mechanical Technology, BACC Metalworking Occupation
<b>School Related Activities</b>	Tech Club
<b>College &amp; University Majors</b>	Electronic Equipment Installation , Industrial Production Technologies , Machine Tool Technologies , Nuclear Power Technologies , Sheet Metal Technology , Tool and Die Technology , Welding Technology , Woodworking
<b>Heartland Certifications</b>	Industrial Technology (Welding, Construction, Design & Fabrication, Facilities Maintenance, Industrial Maintenance, Renewable Energy, and Electronics)



Marketing

**U5**



## Marketing

The Marketing Cluster prepares learners for careers in planning, managing, and performing marketing activities to reach organizational objectives.

<b>Pathways</b>	Marketing Communications, Merchandising, Marketing Management, Professional Sales, Marketing Research
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<b>Careers</b>	<b><u>Certification/Associates Degree:</u></b>			
	Sales Representative	Advertising	Layout Designer	Real Estate Agent
	Marketing Associate	Auctioneer	Customer Service Rep.	Research Assistant
	Instrument Sales			
	<b><u>Bachelors or Higher Degree:</u></b>			
	Purchasing Agent/Manager	Contract Administrator	Marketing Manager	Real Estate Broker
	Account Executive	Co-op Manager	Media Buyer/Planner	Research Specialist
	Account Supervisor	Entrepreneur	Merchandise Buyer	Sales Promotion
	Advertising Manager	Insurance Agent	Public Information Director	Trade Show Manager
	Analyst	Inventory Manager/Analyst	Public Relations Manager	Circulation Manager
	Market Research Analyst			

<b>Unit 5 Recommended Pathway Courses</b>	<u>Marketing Management</u> Year 1 - Introduction to Business Year 2 - Accounting Year 3 - Sports Entertainment & Marketing/Business Law Year 4 - Graphic Design I & II
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<b>Related Electives</b>	Business Management, Advanced Accounting, Economics, AP Statistics, Journalism, Introduction to Computer Programming, Innovative Entrepreneurs, Internship, Photography I & II, Agribusiness Management, Psychology
<b>School Related Activities</b>	FBLA, Art Club, Speech Team, Class Board, FFA
<b>College &amp; University Majors</b>	Advertising, Fashion Merchandising, International Marketing, Marketing, Merchandising, Public Relations, Retail Operations, Sales/Distribution
<b>Heartland Certifications</b>	Communications Graphics, Digital Media Communication Core



Science, Technology, Engineering & Math

**U5**



## Science, Technology, Engineering, & Mathematics

A career in the Science, Technology, Engineering & Mathematics cluster will be involved in planning, managing, and providing scientific research and professional and technical services including laboratory and testing services, and research and development services.

<b>Pathways</b>	Engineering & Technology, Science & Mathematics
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<b>Careers</b>	<b><u>Certification/Associates Degree:</u></b>			
	Veterinary Technician	Industrial Engineering Technician	Biological Technician	Mathematical Technician
	Chemical Technician	Mechanical Engineering Technician	Civil Engineering Technician	Nanotechnology Technician
	Electronics Engineering Technician	Petroleum Technician	Environmental Technician	
	<b><u>Bachelors or Higher Degree:</u></b>			
	Solar Engineer	Astronomer	Computer Engineer	Mechanical Engineer
	Aeronautical Engineer	Automotive Engineer	Electrical Engineer	Metallurgist
	Aerospace Engineer	Biomedical Engineer	Geologist	Nuclear Engineer
	Agricultural Engineer	Biotechnology Engineer	Geothermal Engineer	Petroleum Engineer
	Anthropologist	Industrial Engineer	Physicist	Architectural Engineer
	Civil Engineer	Marine Engineer		

<b>Unit 5 Recommended Pathway Courses</b>	<u>Engineering &amp; Technology</u> Year 1 - Introduction to Engineering Year 2 - Principles of Engineering Year 3 - Civil Engineering & Architecture Year 4 - AP Physics/STEM Capstone
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<b>Related Electives</b>	Technology Concepts, Biological Engineering, STEM Trig, AP Biology, AP Chemistry, Environmental Earth, AP Statistics, AP Calculus, AP Computer Science, Innovative Entrepreneurs, Internship, Ag Mechanics, MAP, Cabinetmaking, Manufacturing Tec
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<b>School Related Activities</b>	IL Math League, Tech Club, Girls Who Code, Scholastic Bowl, Speech Team, STEM Club
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<b>College &amp; University Majors</b>	Aerospace Engineer , Agricultural Engineer , Biomedical Engineer , Chemical Engineer , Civil Engineer , Electrical Engineer , Engineering Technician , Industrial Engineer , Mechanical Engineer , Nuclear Engineer
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<b>Unit 5 Recommended Pathway Courses</b>	Science & Math Year 1 - Biology/Geometry Year 2 - Chemistry/Algebra 2 Year 3 - Physics/Honors Pre-Calculus Year 4 - AP Science/AP Calculus/AP Stats
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<b>Related Electives</b>	Biological Engineering, STEM Trig, Intro to Computer Programming, Earth and Space Science, Molecular and Structural Biology, Chemistry II, Dual Credit Chemistry, AP Biology, AP Chemistry, AP Physics, Environmental Earth, AP Calculus, AP Statistics, AP Computer Science Principles, AP Computer Science A, Entrepreneurship/Internship, BSAA
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<b>School Related Activities</b>	IL Math League, Tech Club, Girls Who Code, Scholastic Bowl, Speech Team, STEM Club
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<b>College &amp; University Majors</b>	Anatomy/Physiology, Astronomy, Biology/Biological Sciences, Chemistry, Ecology, Geology/Earth Science, Physics
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Transportation, Distribution & Logistics

**U5**



## **Transportation, Distribution, & Logistics**

*The Transportation, Distribution and Logistics cluster emphasizes the planning, management, and movement of people, materials, and products by road, air, rail and water. It also includes related professional and technical support services such as infrastructure planning and management, logistic services, and the maintenance of mobile equipment and facilities.*

<b>Pathways</b>	Facility & Mobile Equipment, Maintenance Sales & Service, Health, Safety & Environmental Management, Transportation Systems/Infrastructure Planning, Mgt. & Regulation, Logistics Planning & Management Services, Warehousing & Distribution Center Operations			
<b>Careers</b>	<b><u>Certification/Associates Degree:</u></b>			
	Travel Agent	Aircraft Mechanic	Cargo and Freight Agent	Motorcycle Technician
	Truck Driver	Air Traffic Controller	Diesel Technician	Railroad Conductor
	Warehouse Manager	Automobile Technician	Flight Attendant	Security Consultant
	Avionics Technician	Industrial Equipment Mechanic	Transportation, Storage & Dist. Mgr.	Cartographic Technician
	Industrial & Packaging Engineer			
	<b><u>Bachelors or Higher Degree:</u></b>			
	Locomotive Engineer	Airline Pilot/Co-Pilot	Mechanical Engineer	Safety Analyst
	Astronaut	Environmental Manager	Urban and Regional Planner	International Logistics Specialist
<b>Unit 5 Recommended Pathway Courses</b>	Facility & Mobile Equipment Maintenance Year 1 - Materials Application & Process Year 2 - Machine Operation Year 3 - BACC Automotive Technology I Year 4 - BACC Automotive Technology II			

<b>Related Electives</b>	Introduction to Business, Introduction to Engineering Design, Technology Concepts, Agricultural Mechanical Technology, Accounting, Business Management
<b>School Related Activities</b>	Skills USA, FBLA
<b>College &amp; University Majors</b>	Aircraft Maintenance , Auto body/Collision and Repair Technicians , Automotive Mechanics Technology/Technician , Diesel Mechanics Technology/Technician , Engine Machinist , Small Engine Mechanics and Repair Technology/Technician , Vehicle Emissions Inspection and Maintenance Technology/Technician
<b>Heartland Certifications</b>	Advanced Truck Driver