PROGRAMS OF STUDY U5

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The Sixteen Career Clusters

Career Maps from https://www.iccb.org/cte/?page_id=131

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A Tool for Identifying a Career Cluster & Career Pathway

Unit 5 students are initially introduced to Career Cruising in middle school as they complete assessments to identify areas of interest and research potential career clusters. Career Cruising 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.

Login Page: http://careercruising.com/login/U5

Username: U5-SIS# (U5-12345678)

Password: Birthdate in mmddyyyy format
***Students will change to mmddyy**

Unit 5 High School Counseling Office Information

Normal Community High School

Counseling Office: (309) 557 – 4644

Students	Counselor	Email
A - Col	Addie Ince	incea@myunit5.org
Com - G	Ryan Short	shortre@myunit5.org
H - Le	Karrin Hawkins	hawkinsk@myunit5.org
Li - Pf	Jenn Giermann	giermanj@myunit5.org
Ph - Stol	Kristi White	whiteka@myunit5.org
Stom - Z & ELL	Joan Fee	feej@myunit5.org

Normal Community West High School

Counseling Office: (309) 557-4969

Students	Counselor	Email
A - C	Brooke Bollmann	bollmannb@myunit5.org
D - H	Marty Tarmann	tarmannk@myunit5.org
I - Mh	Corey Ostling	ostlingcm@myunit5.org
Mi - Se	Debbie Sondgeroth	sondgerd@myunit5.org
Sf - Z	Carrie Hoffman	hoffmanc@myunit5.org

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. Pathways link students to learning the knowledge and skills necessary for future education and employment.

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.

Program of Study: Sequence of courses and experiences which include core academic, career and technical education content. Programs of study include opportunities to earn college credit and industry recognized credentials or certificates as well as gain external career experience while in high school.

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 average of four hours per week (½ 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.

	Unit 5 Grad Requirements	State University Requirements	Out-of-State University & Private Colleges	Community Colleges & Vocational	Highly Selective Colleges
English	4 years	4 years w/emphasis on written and oral communication and literature	4 years	4 years	4 years
Math	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
Science	2 years	3 years recommended; Biology Chemistry Physics	2 - 4 years recommended; Biology Chemistry Physics	2 - 3 years	4 years recommended; Biology Chemistry Physics
Social Science	2 years including semester of Civics	3 years emphasis on history and government	2 - 4 Years	2 - 3 Years	3 - 4 Years
World Languages	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
English	Honors English I Honors English II	Composition I & II Intro to Humanities Oral Communication	AP English Literature AP English Language
Family & Consumer Science		Educating Young Children II	
Foreign Language			AP Spanish AP German AP French
Math	Honor Geometry Honors Algebra II Honors Pre-Calculus Honors Calculus III	Finite Math	AP Computer Science Principles AP Computer Science (JAVA) AP Statistics AP Calculus AB AP Calculus BC
Music			AP Music Theory
Science	Honors Biology Honors Chemistry	Dual Credit Chemistry Environment Earth	AP Biology AP Chemistry AP Physics
Social Studies		Western Civilization to 1500 Western Civilization Since 1500	AP Psychology AP Government & Politics U.S. AP Human Geography AP Comparative Government

Core Curriculum

English	Math
Year 1 English I	Algebra, Geometry, Honors Geometry
Year 2 English II	Geometry/Honors, Algebra II/Honors
Year 3 English II, AP Language	Algebra II, Pre-Calculus, Honors Algebra II
Year 4 English Elective, AP Literature	Pre-Calculus, AP Calculus, Math Electives

Science	Social Studies
Year 1 Biology/Honors	Regional World Studies
Year 2 Chemistry/Honors	U.S. History
Year 3 Physics, Science Electives	Civics, SS Elective
Year 4 Electives, AP Courses	Electives, AP Courses

Unit 5 Minimum Graduation Requirements

NUMBER OF CREDITS TO GRADUATE

ENGLISH 4.0

MATH 3.0*

SCIENCE 2.0

SOCIAL STUDIES 2.0**

HEALTH
PHYSICAL EDUCATION 3.5***

CONSUMER EDUCATION 0.5****

ELECTIVES 9.0

TOTAL 24.0

PSAT Test (11th 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
Successful completion of Constitution Test

****0.5 credit Civics Requirement beginning with the class of 2020.**

*****PHYSICAL EDUCATION, HEALTH, AND SAFETY**

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:

Substitutions for Physical Education (No. 6.310)

A junior or senior student may be excused from physical education courses for one of the following reasons with approval in advance by the high school Building Principal or designee:

1. Enrollment in academic classes that are required for admission to an institution of higher learning.
2. Enrollment in academic classes that are required for graduation from high school, provided that failure to take such classes will result in the student being unable to graduate.
3. Participation in an interscholastic athletic program.
4. Participation in marching band.
5. Participation in an adaptive athletic program outside of the school, in the case of a student who has an individualized educational plan.

A student in grades 3-12 who is eligible for special education may be excused from physical education courses if:

1. The student's parent/guardian agrees that the student must utilize the time set aside for physical education to receive special education support and services, or
2. The student's individualized education program team determines that the student must utilize the time set aside for physical education to receive special education support and services.

The agreement or determination must be made a part of the individualized education program. A student requiring adapted physical education must receive that service in accordance with the student's individualized education program.

******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

Math 3.0 - 4.0

Science 3.0 - 4.0

Social Studies 3.0 - 4.0

Foreign Language/Fine Arts 2.0 - 4.0

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.

Pathway: Agriculture & Natural Resources

Pathway Courses:

Year 1 - Intro to Agriculture, Food, & Natural Resources

Year 2 - Agricultural Science BSAA 1 & 2

Year 3 - Agribusiness Management Veterinary Science or Ag Mechanics

Year 4 - Agricultural Mechanical Technology or Agribusiness Management

*Related Electives: Biological Science Applications in Plant Science & Animal Science, Veterinary Science, Biological Engineering, AP Stats, Intro to Oral Communication/Advanced Speech, Entrepreneurship/Internship

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Bass Fishing Club, FFA, FCCLA, Speech Team

College Majors: Animal Health & Nutrition, Agricultural Animal Services, Equestrian Studies, Dairy Science, Animal Sciences

Certifications Heartland: Veterinary Assistant

Pathway: Food Products & Processing

Pathway Courses:

Year 1 - Introduction to Business/Culinary Arts/Food for Thought/AFNR

Year 2 - Introduction to Business/Culinary Arts/Food for Thought/AFNR

Year 3 - BACC Culinary Arts I

Year 4 - BACC Culinary Arts II/Work Program/Entrepreneurship

*Related Electives: AP Stats, Intro to Oral Communication/Advanced Speech, Entrepreneurship

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Bass Fishing Club, Skills USA, FCCLA, Garden Club, FFA, Speech Team

College Majors: Agricultural and Food Products Processing, Agricultural Business and Management, Agricultural Business Technology, Agricultural/Farm Supplies Retailing and Wholesaling, Food Science, Food Technology and Processing

Certifications High School: Sanitation Certification

Certifications Heartland: Illinois Food Service Sanitation Manager

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Agriculture, Food & Natural Resources

The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fuel, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

Sample Career Specialties / Occupations	Agricultural Sales • Agricultural Communications Specialists • Agricultural-Educators • Food Scientists • Meat Processors-Toxicologists • Biochemists-Nutritionists-Dieticians • Food Brokers-Food Inspectors • Meat Cutters-Meat Graders • Meat Science Researchers • Food Meal Supervisors • Cheese Makers • Microbiologists • Produce Buyers • Bacteriologists • Food & Drug Inspectors • Bioengineers • Biochemists • Food & Fiber Engineers • Food Processors • Storage Supervisors• Fieldman • Quality Control Specialists	Bioinformatics Specialists • Plant Breeders and Geneticists • Biotechnology Lab Technician • Soil & Water Specialists • Crop Farm Managers • Agricultural Educators • Plant Pathologists • Aquaculturalists • Sales Representatives • Botanists • Tree Surgeons • Education & Extension Specialists • Agricultural Journalists • Commodity Marketing Specialists •Grain Operations Superintendents •Custom Hay/Silage Operators • Forest Geneticists • Golf Course Superintendents • Greenhouse Mangers • Growers • Farmers •Ranchers	Agricultural Educators • Livestock producers • AI Technicians-Aquaculturalists • Animal Caretakers-Poultry Managers • Equine Managers-Veterinarians • Veterinary Assistants-Feedlot Specialists • Animal Scientists •Embryo Technologists • Livestock Buyers • Feed Sales Representatives • Vivarian Technicians • Wildlife Biologists • Livestock Geneticists • Animal Nutritionists • Dairy Producers• Livestock Inspectors • Feed Sales Specialists •Animal Health Salespersons •Meat Science Researcher •Reproductive Physiologists • Embryo Transfer Technicians • Pet Shop Operators •USDA Inspectors	Machine Operators • Electronics Systems Technicians • Agricultural Engineers • Agricultural Extension Engineering Specialists • Heavy Equipment Maintenance Technicians • Recycling Technicians • Waste Water Treatment Plant Operators • Equipment/Parts Managers • Welders • Machinists • Communication Technicians • Agricultural Applications Software Developers/Programmers • Database Administrators • Computer Service Technical Support Technicians • Information Lab Specialists •GPS Technicians• Remote Sensing Specialist•Agricultural Educator	Cartographers • Wildlife Managers • Range Technicians • Ecologists Park Mangers • Environmental Interpreters • Fish and Game Officers Loggers • Forest Technicians • Log Graders • Pulp and Paper Manager Soil Geology Technician • Geologists • Mining Engineers Fisheries Technicians • Water Monitoring Technician • Hydrologists • Fish Hatchery Manager Commercial Fishermen • Fishing Vessel Operators • Vessel Crew •Agricultural Educator	Pollution Prevention and Control Managers • Pollution Prevention and Control Technicians• Environmental Sampling and Analysis Scientists/Technicians• Health and Safety Sanitarians• Environmental Compliance Assurance Managers• Hazardous Materials Handlers • Hazardous Materials Technicians / Managers• Water Environment Managers • Water Quality Managers• Waste Water Managers• Toxicologists• Solid Waste Disposers / Recyclers• Solid Waste Technician• Solid Waste Managers • Solid Waste Specialists•Agricultural Educator	Salesperson • Sales Manager •Banker/Loan Officer • Field Representative for Bank, Insurance Company or Government Program • Farm Investment Manager • Agricultural Commodity Broker • Agricultural Economist • Farmer /Rancher/Feedlot Operator • Farm Manager • Livestock Rancher / Breeder • Dairy Herd Supervisor (DHIA) • Agricultural Products Buyer • Animal Health Products Distributor • Livestock Seller • Feed and Supply Store Manager • Produce Commission Agent • Ag Lenders • Agricultural Chemical Dealer • Field Service Representative • Chemical Sales Representative•Agricultural Educator
Pathways	**Food Products and Processing Systems** (Food Processing and preserving, Packaging, Distribution, Government monitoring & regulation)	**Plant Systems** (Agronomic, Horticulture, Forestry, Turf, Viticulture, Soils, etc.)	**Animal Systems** (Large animals, small animals, wildlife animals, and research animals)	**Power, Structural & Technical Systems** (Power, Structures, Controls, Geospatial Technology, Computer Systems, Electronics, Hydraulics, Pneumatics, etc.)	**Natural Resources Systems** (Habitat Conservation, Forest Products, Parks and Recreation, Mining, Environmental Services, Fisheries, Soil Conservation, etc.)	**Environmental Service Systems** (Pollution Prevention, Water & Air Quality, Hazardous Materials, Solid Waste Management, Health & Safety Sanitation, etc.)	**Agribusiness Systems** (Sales, Service, Farm and Ranch Management, Entrepreneurship, Economics, etc.)
CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.						

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.

Pathway: Architecture

Pathway Courses:

Year 1 - Introduction to Engineering

Year 2 - Principles of Engineering

Year 3 - Civil Engineering and Architecture

Year 4 - Internship/STEM Capstone

*Related Electives: Introduction to Business, Introduction to Oral Communication/ Advanced Speech, Entrepreneurship, Consumer Ed, Interior Design I & II, AP Calculus and AP Statistics, Drawing and Painting I & II

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Skills USA, Tech Club, STEM Club, Speech Team

College Majors (examples) 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

Certifications Heartland: Industrial Technology (Welding, Construction, Design & Fabrication, Facilities Maintenance, Industrial Maintenance, Renewable Energy, and Electronics)

Pathway: Construction

Pathway Courses:

Year 1 - Materials Applications & Process

Year 2 - Manufacturing Technology

Year 3 - BACC Construction I

Year 4 - BACC Construction II

*Related Electives: Introduction to Business, Business Management, Introduction to Oral Communication/Advanced Speech, Geometry in Construction, Calculus, Graphic Design I & II

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Skills USA, Tech Club, Speech Team

College Majors (examples) Building/Construction Management , Construction Engineering Technology , Energy Management and Systems Technology , Heating, Air Conditioning and Refrigeration Technology

Certifications High School: OSHA 10

Certifications Heartland: Industrial Technology (Welding, Construction, Design & Fabrication, Facilities Maintenance, Industrial Maintenance, Renewable Energy, and Electronics)

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Architecture & Construction

Careers in designing, planning, managing, building and maintaining the built environment.

Sample Career Specialties / Occupations

Design/Pre-Construction

- Architect •
- Architectural and Civil Drafter •
- Civil Engineer (structural, geotechnical, transportation, etc.) •
- Civil Engineering Technician •
- Code Official •
- Computer Aided Drafter (CAD) •
- Cost Estimator •
- Drafter •
- Electrical and Electronic Engineering Technician •
- Electrical Engineer (electronics, security, telecommunications) •
- Environmental Designer •
- Environmental Engineer (hydro engineering, acoustical, etc.) •
- Environmental Engineering Technician •
- Fire Prevention and
- Industrial Engineer •
- Interior Designer • Landscape Designer •
- Landscape Architect •
- Materials Engineer •
- Mechanical Drafter •
- Mechanical Engineer (HVAC, plumbing, fire protection, etc.) •
- Modeler (traditional and computer)
- Planner/Designer •
- Preservationist •
- Programmer •
- Protection Engineer •
- Regional and Urban
- Renderer (traditional and computer) •
- Specifications Writer • Building
- Surveying and Mapping Technician •
- Surveyor •

Construction

- Boilermaker •
- Carpenter •
- Carpet Installer •
- Concrete Finisher •
- Construction Craft Laborer •
- Construction Engineer •
- Construction Foreman •
- Construction Inspector •
- Construction Manager •
- Drywall Installer •
- Education and Training Director/Coordinator •
- Electrical & Power Transmission Installer •
- Electrician •
- Electronic Systems Technician •
- Elevator Installer •
- Equipment and Material Manager •
- Estimator •
- Explosives Worker •
- Field Supervisor •
- Floor Layer •
- General Contractor/Builder •
- Glazier •
- Heating, Ventilation, Air Conditioning and Refrigeration Mechanic •
- Insulation Worker •
- Iron/Metalworker (structural and reinforcing) •
- Landscaper/Groundskeeper •
- Lineworker •
- Manufacturer's Representative •
- Mason •
- Millwright •
- Painter •
- Paperhanger •
- Pipe Fitter •
- Pipelayer •
- Pipeline Installer
- Plasterer/Drywall •
- Plumber •
- Preservationist •
- Project Inspector •
- Project Manager •
- Roofer •
- Safety Director •
- Sales and Marketing Manager •
- Scheduler •
- Security and Fire Alarm Systems Installer •
- Service Contractor •
- Sheetmetal Worker •
- Specialty Contractor •
- Specialty Trades Subcontractor •
- Steamfitter •
- Subcontractor •
- Superintendent •
- System Installer •
- Terrazo Worker and Finisher •
- Tile and Marble Setter •

NOTE: General contractors/Builders and Specialty contractors typically own the contracting company.

Maintenance/Operations

- Boilermaker •
- Carpenter •
- Carpet Installer •
- Concrete Finisher •
- Construction Manager •
- Construction Engineer •
- Construction Foreman •
- Construction Inspector •
- Cost Estimator •
- Demolition Engineer •
- Drywall Installer •
- Electrician •
- Electrician •
- Elevator Installer •
- Environmental Engineer •
- Equipment and Material Manager •
- Estimator •
- Facilities Engineer •
- Field Supervisor •
- General Maintenance Contractor •
- Glazier •
- Hazardous Materials Remover •
- Heating, Ventilation, Air Conditioning and Refrigeration Mechanic •
- Heavy Equipment Operator •
- Highway Maintenance Worker •
- Hydro Testing Technician •
- Insulation Worker •
- Insulation Worker •
- Iron/Metalworker (structural and reinforcing) •
- Landscaper/Groundskeeper •
- Maintenance Estimator •
- Maintenance Planner/Scheduler •
- Manufacturer's Representative •
- Mason •
- Millwright •
- Operating Engineer •
- Paperhanger •
- Pipe Fitter •
- Pipelayer •
- Plumber •
- Preservationist •
- Project Inspector •
- Project Manager •
- Refractory Technician •
- Relay Technician
- Reliability Engineer •
- Remodeler •
- Restoration Technician •
- Safety Director •
- Sales and Marketing Manager •
- Scheduler •
- Security and Fire Alarm System Installer •
- Security Controls Manager •
- Service Contractor •
- Sheetmetal Worker •
- Specialty Trades Contractor •
- Steamfitter •
- Subcontractor •
- Substation Mechanic
- Superintendent •
- System Installer •
- Terrazo Worker and Finisher •
- Thermal Control Technician •
- Tile and Marble Setter •
- Utility Metering &Reg.Technician
- Wastewater Maintenance •

Pathways

Design/Pre-Construction | **Construction** | **Maintenance/Operations**

CCTC /Career Ready Practices

The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready

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

Pathway: Audio Visual Technology

Pathway Courses:

Year 1 - Technology Concepts

Year 2 - Animation & Rendering

Year 3 - Digital Media Production

Year 4 - Advanced Digital Media Production

*Related Electives: Intro to Oral Communication/Advanced Speech, Creative Writing, Graphic Design I & II, Photography I & II, Lit of the Silver Screen, Drama Club

*See following page and choose electives depending on your pathway.

School Related Activities: Art Club, FCCLA, Film Club, Tech Club, Speech Team

College Majors (examples) 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, General , Intermedia/Multimedia , Museology/Museum Studies , Photography

Certifications Heartland: Communication Graphics, Web Design Skills, Web Media Designer, Digital Imaging, and Digital Media Communication Core

Pathway: Art

Pathway Courses:

Year 1 - Drawing & Painting I and II

Year 2 - Ceramics & Sculptures I and II

Year 3 - Advanced Art Studio I/Graphic Design I & II/Photography I & II

Year 4 - Advanced Art Studio II/Graphic Design I & II/Photography I & II

* Related Electives: Intro to Oral Communication/Advanced Speech, Entrepreneurship, Fashion I, II, and III, Photography I & II, Graphic Design I & II, Contemporary Crafts, Theater I & II, Advanced Acting & Directing, Introduction to the Humanities

*See following page and choose electives depending on your pathway.

School Related Activities: Art Club, FCCLA, Film Club, Photography Club, Thespians, Drama Club, Speech Team

College Majors (examples) , Advertising Art Direction , Arts Administration , Art Education , Art History , Fine Arts , Illustration , Interior Design , Visual Arts

Certifications Heartland: Communication Graphics, Web Design Skills, Web Media Designer, Digital Imaging, and Digital Media Communication Core

Pathway: Communications

Pathway Courses:

Year 1 - Computer Applications/Computer Applications II/Web Design

Year 2 - Journalism I

Year 3 - Intro to Oral Communication/Advanced Speech/Journalism II

Year 4 - Journalism III

*Related Electives: Intro to Oral Communication/Advanced Speech, Entrepreneurship, Theater I & II, Advanced Acting & Directing, Creative Writing, Yearbook, Graphic Design I & II, Foreign Language

*See following page and choose electives depending on your pathway.

School Related Activities: Speech Team, Foreign Language Clubs,

College Majors (examples) English, Creative Writing, Communications, Professional Writing, Linguistics

Certifications Heartland: Communication Graphics, Web Design Skills, Web Media Designer, Digital Imaging, and Digital Media Communication Core

Pathway: Music

Pathway Courses:

Year 1 - Band/Choir/Orchestra

Year 2 - Band/Choir/Orchestra

Year 3 - Band/Choir/Orchestra

Year 4 - Band/Choir/Orchestra

*Related Electives: American Popular Music, AP Music Theory, Additional Band/Choir/Orchestra, Introduction to the Humanities

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Color Guard, Marching Band, Pep Band, Jazz Band, Choir, Dance Team, A Cappella Groups, Madrigals, Court Singers, Musical Orchestra, Tri-Music Honor Society, Speech Team

College Majors (examples) Conducting , Instrumental Performance , Jazz , Music , Music Composition , Music Education , Music Therapy , Music Theory

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Arts, A/V Technology & Communications

Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

Sample Career Specialties/Occupations	♦ Video Systems Technicians ♦ Video Graphics, Special Effects, and Animation ♦ Audio-Video Designers and Engineers ♦ Technical Computer Support Technicians, State, Film, Video, and DVD ♦ Audio-Video System Service Technicians ♦ Audio Systems Technicians	♦ Graphics and Printing Equipment Operators ♦ Lithographers and Platemakers ♦ Computer Typography and Composition Equipment Operators ♦ Desktop Publishing Specialists; Web Page Designers	♦ Commercial Photographers, Digital, Still, Video, Film ♦ Interior Designers, Commercial/Residential and Home Furnishings coordinators ♦ Graphic Designers, CAD Technicians, and Fashion Illustrators ♦ Textile Designers ♦ Commercial Artists, Illustrators, and Artists, all Media ♦ Curators and Gallery Managers ♦ Fashion Designers	♦ Production Managers, Digital, Video, Stage ♦ Cinematographers, Film/Video Editors ♦ Dancers ♦ Play Writers, Screen Writers, Screen Editors, Script Writers ♦ Directors and Coaches, Performers, actors, Musicians ♦ Make-Up Artists and Costume Designers ♦ Stagecraft Designers, Lighters, Sets, Sound Effects, Acoustics, Painters ♦ Composers, Conductors, and Music Instructors	♦ Audio/Video Operations, Control Room Technician ♦ Station Mangers and Radio & TV Announcers ♦ Publishers, Editors, and Journalists and Reporters, Print, Broadcast, Other ♦ Broadcast Technicians	♦ Telecommunication Technicians ♦ Telecommunication Equipment, Cable, Line Repairers/Installers ♦ Telecommunication Computer Programmers, and Systems Analysts
Pathways	**Audio and Video Technology and Film**	**Printing Technology**	**Visual Arts**	**Performing Arts**	**Journalism and Broadcasting**	**Telecommunications**
CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.					

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.

Pathway: Business Management & Administration

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - Accounting

Year 3 - Advanced Accounting

Year 4 - Business Management/Sports & Entertainment Marketing

*Related Electives: Personal Investment & Finance, Business Law, Computer Applications I & II, Web Page Design, Intro to Oral Communication/Advanced Speech, AP Calculus, AP Statistics, Entrepreneurship/Internship, Agribusiness Management

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Key Club, Interact Club, Mock Trial, Future Business Leaders of America, FCCLA, Student Council, Class Board, Speech Team

College Majors (examples) 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

Certifications Heartland: Accounting Foundations, Small Business Management, and Business Technology (Administrative Assistant Training and Office Manager)

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Business Management & Administration

Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector

Sample Career Specialties / Occupations	Entrepreneur • Chief Executive Officer • General Manager • Accounting Manager •Accounts Payable Manager • Assistant Credit Manager • Billing Manager • Business & Development Manager • Compensation & Benefits Manager • Credit & Collections Manager • Payroll Manager • Risk Manager • Operations Manager • Public Relations Manager • Human Resource Manager • Management Analyst • Facilities Manager • Association Manager • Sports & Entertainment Manager•Hospital Manager • Government Manager • Public Organization Manager • Manufacturing Manager • Purchasing Manager • First Line Supervisor • Senior Manager • Management Trainee • Small Business Owner	•Information Systems Manager •Accounting Clerk • Accounting Supervisor • Adjuster • Chief Technology Officer • Auditor • Bookkeeper • Budget Analyst • Budget Manager • Billing Supervisor • Management Analyst • Controller • Merger & Acquisitions Manager • Price Analyst • Top Collections Executive • Information Technology Director • Chief Financial Officer • Finance Director • Certified Public Accountant • Project Manager •Cost Accountant • Librarian • Payroll Accounting Clerk	Human Resources Manager • International Human Resources Manager • Human Resources Coordinator • Industrial Relations Director • Compensation & Benefits Manager • Employment & Placement Manager • Employee Assistance Plan Manager • Training & Development Manager • Human Resources Consultant•Corporate Trainer • Training & Development Specialist • Conciliator/Mediator/Arbitrator • Employer Relations Representative • Labor & Personnel Relations Specialist • Affirmative Action Coordinator • Equal Employment Opportunity Specialist • OSHA/ADA Compliance Officer • Pay Equity Officer • Interpreter/Translator • Organizational Behaviorist • Occupational Analyst • Compensation, Benefits & Job Analyst Specialist • Human Resources Information Systems Specialist • Meeting & Convention Planner • Employment Interviewer, Private or Public Employment Service • Personnel Recruiter • Human Resources Assistant • Payroll Professional • Identification Clerk • Human Resources Generalist	• Training and Development Manager • Operations Analyst • Sales Manager • Sales Representative • Broker • Agent • Assistant Store Manager • Department Manager • Assistant Department Manager • Salesperson • Customer Service Supervisor • Product Manager • Project Manager • Research & Development Manager • Budget Analyst • International Merchandising Manager & Supervisor • Marketing Manager • E-commerce Manager & Entrepreneur • Wholesale & Retail buyer • International Distribution Manager • Warehouse Manager • Logistics Manager/Supervisor • Logistics Manager/Coordinator • Marketing Information Manager•Public Relations Specialist • Distribution Worker • Wholesale, Freight, Stocking, Handling, Material Moving and Packing Worker • Traffic, Shipping, & Receiving Clerk • Demonstrator and Product Promoter •Supply Chain Manager •Director of Non-Profit Agency/Organization •Operations Specialties Manager •Industrial Production Manager	Administrative Assistant • Executive Assistant • Office Manager • Administrative Support • Information Assistant • Desktop Publisher • Customer Service Assistant • Data Entry Specialist • Receptionist • Communications Equipment Operator • Computer Operator • Stenographer • Dispatcher • Shipping & Receiving Assistant • Word Processor • Medical Transcriptionist • Legal Secretary • Paralegal
Pathways	**General Management**	**Business Information Management**	**Human Resources Management**	**Operations Management**	**Administrative Support**

CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.

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.

Pathway: Education & Training

Pathway Courses:

Year 1 - Elective

Year 2 - Parenting/Child Development

Year 3 - Educating Young Children I

Year 4 - Educating Young Children II

*Related Electives: Introduction to Business, Computer Applications I & II, Psychology, AP Psychology, Sociology, Business Management, Introduction to Oral Communication/Advanced Speech, Entrepreneurship/Internship

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Principal's Advisory Committee, Scholastic Bowl, Student Council, Peer Leadership/Mentoring, Key Club, Interact, FBLA, FCCLA, Speech Team, Best Buddies, PRIDE/GSA

College Majors (examples) Library Science , Multicultural/ESL Education , Primary Education , School Administration , School Counseling , Special Education , Sport and Fitness Management

Certifications High School: Gateways to Opportunity Level I Credential

Certifications Heartland: Early Childhood Education Level 2 Credential and Early Childhood Education Infant-Toddler Level 2 Credential

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Education & Training

Planning, managing and providing education and training services, and related learning support services.

Sample Career Specialties / Occupations	Elementary and Secondary Superintendents, Principals, Administrators •Supervisors and Instructional Coordinators •Education Researchers, Test Measurement Specialists/ Assessment Specialists •College Presidents, Deans, Department Chairs, Program Coordinators Post-Secondary Administrators •Curriculum Developers •Instructional Media Designers Education and Training Technician Labor Relations Managers/Specialists	•Psychologists- Clinical, Developmental, Social •Social Workers •Parent Educators •Counselors •Program Advisors •Financial Aid Advisors •Career Counselors/ Advisors •Career and Employment Placement Counselors •Speech-Language Pathologists and Audiologists •Instructional Resources Coordinator •Technology Support Administrator Database Administrators/AV Specialists •Distance Education Coordinator Human Resources Manager Organization Development Specialist Training Manager/Coordinator Instructional Coordinators Museum Coordinators/Technicians Media Coordinators/Specialists Instructional Media Designer	• Preschool, Kindergarten Teachers, Aides •Elementary Teachers, Aides •Secondary/CTE Teachers, Aides •Special Education Teachers, Aides •College/University Lecturers, Professors Human Resource Trainers Physical Trainers Professional Coaches •Preschool & Child Care Program Directors •Child Care Assistants/Workers •Child Life Specialist •Nanny •Early Childhood Teachers and Assistants • Instructional Systems Specialist Corporate Trainers and Educators Adult Literacy Teachers Librarians/Assistants/ Technicians
Pathways	**Administration and Administrative Support**	**Professional Support Services**	**Teaching/Training**
CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.		

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.

***P*athway: Finance**

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - Accounting

Year 3 - Advanced Accounting

Year 4 - Personal Investment & Finance/Business Law

*Related Electives: Computer Application I & II, Business Management, Economics, AP Calculus, AP Computer Science, AP Statistics, Entrepreneurship/Internship, Agribusiness Management

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Math Team, Math League, Future Business Leaders of America, Speech Team

College Majors (examples) 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

Certifications Heartland: Accounting Foundations

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PATHWAYS TO COLLEGE & CAREER READINESS

Finance

Planning, services for financial and investment planning, banking, insurance, and business financial management.

Sample Career Specialties / Occupations	Personal Financial Advisors •Tax Preparation Specialists •Sales Agents-Securities, Commodities •Investment Advisors •Brokerage Representatives •Development Officers •Securities/Investments Analysts •Stock Brokers	Accountants• Financial Analysts•Treasurers, Controllers and Chief Revenue Agents•Auditors•Economists•Tax Auditors •Collectors•Revenue Agents •Benefits Specialists •Real Estate Analysts • Certified Purchasing Professionals •Client Managers	Credit Analysts• Loan Officers• Account Representatives• Tellers•Loan Processors•Customer Service Reps•Data Processors• Internal Auditors•Compliance Officers•Title Researchers & Examiners•Abstractors •Repossession Agents •Network Service Representatives •Operations Managers •Debt Counselors	Claims Representatives, Examiners, and Investigators •Insurance Appraisers•Underwriters• Actuaries •Sales Agents •Customer Service Agents •Processing Clerks •Direct Marketing Representatives •Insurance Brokers •Loss Prevention Specialists
Pathways	**Securities & Investments**	**Business Finance**	**Banking Services**	**Insurance**
CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.			

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.

Pathway: Government & Public Administration

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - Civics/Elective

Year 3 - Economics/International Relations/AP Language

Year 4 - AP Comparative Government/AP Government & Politics/English 4 Literature/AP Literature

*Related Electives: Intro to Oral Communication/Advanced Speech, 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

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Speech Team, Student Council, Mock Trial, Impact West, FED Challenge, Social Studies Club, Model UN, Class Board

College Majors (examples) American Government and Politics , City/Urban, Community and Regional Planning, Political Communication , Political Science and Government , Public Administration , Public Policy Analysis , Urban Studies/Affairs

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PATHWAYS TO COLLEGE & CAREER READINESS

Government & Public Administration

Executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels.

Sample Career Specialties / Occupations	President Vice President Governor Lieutenant Governor Mayor Cabinet Level Secretary (Fed./ State) Representative (Fed/State) Senator (Fed/State) Assistants, Deputies, and Chiefs of Staff Commissioner (County, Parish, City) Commissioner (State Agency) Congressional Aide Legislative Aide Legislative Assistant Specialist Lobbyist Policy Advisor	National Security Advisor Staff or Field Officer Officer/Specialist: Electronic Warfare Operations Combat Operations Infantry Field Artillery Air Defense Artillery Special Forces Armor Munitions Nuclear Weapons Missile and Space Systems Military Intelligence Signals Intelligence Surface Ship Warfare Officer Submarine Officer Combat Control Officer Combat Engineer Combat Aircraft Pilot/Crew Airborne Warning/Control Specialist Intelligence/Counterintelligence Agent/Specialist Intelligence Analyst Cryptographer	Ambassador Foreign Service Officer: Consular Officer Administrative Officer Political Officer Economic Officer Diplomatic Courier	Business/Enterprise Official Chief of Vital Statistics Commissioner Director (Various Agencies) Economic Development Coordinator Federal Aid Coordinator Census Clerk County Director Census Enumerator Planner Program Associate Global Imaging Systems Specialist	Assessor Tax Auditor Internal Revenue Investigator Revenue Agent/Officer Tax Examiner/ Assistant/Clerk Inspector General Tax Attorney Tax Policy Analyst	Business Regulation Investigator Chief of Field Operations Code Inspector/Officer Director Equal-Opportunity Officer Inspector Investigator/Examiner Chief Bank Examiner Bank Examiner Aviation Safety Officer Border Inspector Cargo Inspector Election Supervisor Enforcement Specialist Immigration Officer	City Manager City Council City or County Clerk Court Administrator or Clerk Executive Director/ Officer/Associate: Foundation Association Charitable Organization Industrial Foundation Chamber of Commerce General Service Officer Management Analysis Officer Program Administration Officer
Pathways	**Governance**	**National Security**	**Foreign Service**	**Planning**	**Revenue and Taxation**	**Regulation**	**Public Management and Administration**
CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.						

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 or laboratories, cruise ships, medevac units, sports arenas, space centers, or within the community.

Pathway: Health Science

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - Core Classes/BACC Health Careers & Medical Terminology

Year 3 - Physics/BACC Nurse Assistant

Year 4 - AP Science/BACC Advanced CNA

*Related Electives: Intro to Oral Communication/Advanced Speech, 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

School Related Activities: Athletics, Skills USA, Speech Team

College Majors (examples) Biotechnology , Community Health and Preventive Medicine , Dentistry , Emergency Medical Technology/Technician , Health Informatics/Medical Records Administration , Medicine , Nursing , Pharmacy

Certifications High School: HIPAA, Certified Nursing Assistant, CPR & AED

Certifications Heartland: Nursing Assistant, Practical Nursing, EMT Basic, and EMT Paramedic

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PATHWAYS TO COLLEGE & CAREER READINESS

Health Science

Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

Sample Career Specialties/Occupations

Acupuncturist	Audiologist	Admitting Clerk	Animal Behavioralist	Biochemist
Anesthesiologist/Assistant	Blood Bank Technology Specialist	Applied Researcher	Biomedical/Clinical Engineer	Bioinformatics Scientist
Anesthesia Technologist/Technician	Cardiovascular Technologist	Compliance Technician	Biomedical/Clinical Technician	Biomedical Chemist
Art/Music/Dance Therapist(s)	Clinical Lab Technician	Clinical Account Manager	Clinical Simulator Technician	Biomedical Manufacturing Technician
Athletic Trainer	Clinical Laboratory/Technologist	Clinical Account Technician	Central Service Manager	Biostatistician
Audiologist	Computer Tomography (CT) Technologist	Clinical Data Specialist	Central Service Technician	Cancer Registrar
Certified Nursing Assistant	Cytogenetic Technologist	Community Services Specialists	Community Health Worker	Cell Biologist
Chiropractor	Cytotechnologist	Data Quality Manager	Dietary Manager	Clinical Data Management Specialist
Chiropractic Assistant	Dentist	Epidemiologist	Dietetic Technician	Clinical Pharmacologist
Dental Assistant/Hygienist	Diagnostic Medical Sonographer	Ethicist	Environmental Health Advocate	Clinical Trials Monitor
Dental Lab Technician	Electrocardiographic (ECG) Technician	Health Educator	Environmental Health Practitioner	Clinical Trials Research Coordinator
Dietitian/Nutritionist	Electroneurodiagnostic Technologist	Health Information Mgmt. Administrator	Environmental Services/ Specialist	Crime Scene Investigator
Dosimetrist	Electronic Diagnostic (EEG) Technologist	Health Information Mgmt. Technician	Facilities Manager	Diagnostic Molecular Scientist
EMT/Paramedic	Exercise Physiologist	Healthcare Access Manager	Food Safety Specialist	Forensic Biologist
Endodontist	Geneticist	Healthcare Administrator	Health Advocate	Forensic Chemist
Exercise Physiologist	Geriatrician	Healthcare Finance Informatician	Hospital Maintenance Engineer	Forensic Odontologist
Home Health Aide	Histotechnician	Information Privacy Officer	Industrial Hygienist	Forensic Pathologist
Kinesiotherapist	Histotechnologist	Managed Care Contract Analyst	Interpreter	Genetic Counselor
Licensed Practical Nurse	Magnetic Resonance Technologist	Medical Coder	Martial, Couple, Family Counselor/Therapist	Geneticist-Lab Assistant
Massage Therapist	Mammographer	Medical Historian	Materials Manager	Lab Technician
Medical Assistant	Medical Technologist/ Clinical Laboratory Scientist	Medical Illustrator	Medical Health Counselor	Medical Editor/Writer
Mental Health Counselor	Nuclear Medicine Technologist	Medical Information Technologist	Mortician/ Funeral Director	Microbiologist
Naturopathic Doctor	Optician	Medical Librarian	Nurse Educator	Molecular Biologist
Nurse Anesthetist	Ophthalmologist	Medical Transcriptionist	Occupational Health Nurse	Nurse Researcher
Nurse Midwife	Ophthalmic Assistant/Technologist	Patient Account Manager	Occupational Health & Safety Expert	Packaging Technician
Nurse Practitioner	Optometrist	Patient Account Technician	Social Worker	Patent Lawyer
Occupational Therapist/Assistant	Pathologist	Patient Advocate	Transport Technician	Pharmaceutical/Clinical Project Manager
Oral Surgeon	Pathologists' Assistant	Patient Information Coordinator		Pharmaceutical Sales Representative
Orientation/Mobility Specialist	Phlebotomist	Project Manager		Pharmaceutical Scientist
Orthodontist	Polysomnographic Technologist	Public Health Educator		Pharmacokineticist
Orthoptist	Positron Emission Tomography (PET) Technologist	Quality Management Specialist		Pharmacologist
Orthotist/Prosthetist/Technician	Radiologic Technologist	Quality Data Analyst		Product Safety Scientist
Pedorthist	Radiologist	Research and Decision Support Specialist		Process Development Scientist
Perfusionist	Speech-Language Pathologist	Reimbursement Specialist		Processing Technician
Pharmacist		Risk Manager		Quality Assurance Technician
Pharmacy Technician		Unit Coordinator		Quality Control Technician
Physical Therapist/Assistant		Utilization Manager		Regulatory Affairs Specialist
Physician (MD/DO)		Utilization Review Manager		Research Assistant
Physician Assistant				Research Scientist
Podiatrist				Toxicologist
Psychologist				
Psychiatrist				
Radiation Therapist				
Recreation Therapist				
Registered Nurse				
Rehabilitation Counselor				
Respiratory Therapist				
Speech-Language Therapist				
Surgical Technician				
Veterinarian				
Veterinarian Assistant/Technician				
Vision Rehabilitation Therapist				

Path-ways	Therapeutic Services	Diagnostics Services	Health Informatics	Support Services	Biotechnology Research and Development
CCTC /Career Ready	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.				

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.

Pathway: Food Service

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - Culinary Arts/Food for Thought

Year 3 - BACC Culinary Arts I

Year 4 - BACC Culinary Arts II

*Related Electives: Intro to Oral Communication/Advanced Speech, Lifestyle Management, Business Management, Entrepreneurship/Internship, Foreign Language

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, FCCLA, Speech Team, Foreign Language Clubs, FBLA, Student Council, German Club

College Majors (examples) Baking and Pastry Arts/Baker/Pastry Chef, Cooking and Related Culinary Arts, General, Culinary Arts/Chef Training, Hotel Administration/Management, Restaurant/Food Services Management

Certifications High School: Sanitation

Certifications Heartland: Illinois Food Service Sanitation Management

Pathway: Recreation & Management

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - Computer Applications I & II

Year 3 - Business/Web Design

Year 4 - Business Management/Sports & Entertainment Marketing

*Related Electives: Intro to Oral Communication/Advanced Speech, 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

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, FBLA, FCCLA, FFA, Speech Team, Art Club, Photography Club, Outdoor Adventure Club, Team Unified, Best Buddies, Student Council

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Hospitality & Tourism

Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other foodservices, lodging, attractions, recreation events and travel related services.

Sample Career Specialties /Occupations	General Manager •Food & Beverage Manager •Kitchen Manager •Catering & Banquets Manager •Service Manager• Dining Room Supervisor •Restaurant Owner •Baker •Brewer •Caterer •Dietician •Executive Chef •Cook •Pastry & Specialty Chef •Bartender •Restaurant Server •Banquet Server •Cocktail Server •Banquet Set-Up Employee• Bus Person •Room Service Attendant •Kitchen Steward •Counter Server •Wine Steward •Host •Research and Development Chef •Food/Beverage Wholesaler •Product Demonstrator •Personal Chef	Front Office Manager •Executive Housekeeper •Director of Sales & Marketing •Chief Engineer •Director of Human Resources •Rooms Division Manager •Director of Security •Controller •Food & Beverage Director •Resident Manager •Director of Operations •General Manager •Regional Manager •Quality Assurance Manager •Corporate Management •Lodging Management •Owner/Franchisee •Uniformed Services Support •Communications Supervisor •Front Desk Supervisor •Reservations Supervisor •Laundry Supervisor •Room Supervisor •Bell Captain •Shift Supervisor •Sales Professional •Night Auditor •Front Desk Employee •Valet Attendant •Bell Attendant•Door Attendant •Concierge •Reservationist •Guestroom Attendant •Public Space Cleaner •House Person•Maintenance Worker•Van Driver	Executive Director •Assistant Director •Director of Tourism Development •Director of Membership Development •Director of Communications •Director of Visitor Services •Director of Sales •Director of Marketing and Advertising •Director of Volunteer Services •Director of Convention and Visitors Bureau •Market Development Manager •Group Sales Manager •Events Manager •Sales Manager •Destination Manager •Convention Services Manager •Heritage Tourism Developer •Travel Agent (Commercial & Vacation) •Event Planner •Meeting Planner •Special Events Producer •Nature Tourism Coordinator •Tour and Travel Coordinator •Tourism Marketing Specialist •Transportation Specialist • Welcome Center Supervisor •Visitor Center Counselor •Tourism Assistant •Executive Assistant •Tour Guide •Tour Operator •Motor Coach Operator •Tour and Ticket Reservationist •Interpreter	Club Manager•Club Assistant Manager•Club Instructor•Club Equipment & Facility Maintenance •Club Scheduler•Club Event Planner•Club Membership Developer•Parks & Gardens Director•Parks & Gardens Activity Coordinator•Parks & Gardens Access Management•Parks & Gardens Safety & Security•Parks & Garden Ranger•Resort Trainer•Resort Instructor•Resort Equipment Maintenance•Resort Scheduler•Gaming & Casino Manager•Gaming & Casino Supervisor•Gaming & Casino Dealer•Gaming & Casino Slot Supervisor and Maintenance•Gaming & Casino Security & Safety•Fairs/Festival Event Planner•Fairs/Festival Set up Supervisor•Fairs/Festival Facility Manager•Fairs/Festival Promotional Developer•Theme Parks/Amusement Parks Resale Department Manager•Theme Parks/Amusement Parks Area Retail Manager•Theme Parks/Amusement Parks Area Ride Operations Manager•Theme Parks/Amusement Parks Group Events Manager•Family Centers Manager•Family Centers Equipment Operator/Maintenance•Historical /Cultural/Architectural Ecological Industrial Sites Guides/Ranger•Historical/Cultural/Architectural Ecological Industrial Sites Exhibit Developer•Museums/Zoos/Aquariums Docent•Museum/Zoos/Aquariums Animal Trainer and Handler•Museums/Zoos/Aquariums Exhibit Developer
Pathways	**Restaurants and Food/Beverage Services**	**Lodging**	**Travel & Tourism**	**Recreation, Amusements & Attractions**
CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.			

Human Services U5

Human Services

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

Pathway: Early Childhood Development

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - Parenting/Child Development

Year 3 - Educating Young Children I

Year 4 - Educating Young Children II

*Related Electives: Intro to Oral Communication/Advanced Speech, Psychology, AP Psychology, Entrepreneurship/Internship, Personality Behavior and Relationships, Foreign Language

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, FCCLA, Peer Leadership/Mentoring, Student Council, Key Club, Foreign Language Clubs, Social Studies Club, Class Board, Culture Club, Interact, Speech Team, FBLA, Best Buddies, PRIDE/GSA

College Majors (examples) Early Childhood Education, Multicultural/ESL Education, Special Education, Sport and Fitness Management

Certifications Heartland: Early Childhood Education Level 2 Credential and Early Childhood Education Infant-Toddler Level 2 Credential

Pathway: Personal Care Services

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - BACC Cosmetology I

Year 3 - BACC Cosmetology II

Year 4 - BACC Cosmetology III

*Related Electives: Intro to Oral Communication/Advanced Speech, Business Management, Personality Behavior & Relationships, Lifestyle Management, Entrepreneurship/Internship, Personality Behavior and Relationships, Accounting

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Skills USA, Speech Team, Foreign Language Clubs, Social Studies Club, FCCLA, Student Council, Culture Club, Interact

College Majors (examples) Coaching Education, Exercise Science, Health Fitness Specialist, Kinesiology

Certifications High School: State of Illinois Cosmetology License

Pathway: Counseling & Mental Health Services

Pathway Courses:

Year 1 - Elective

Year 2 - Child Development/Elective

Year 3 - Psychology/AP Psychology

Year 4 - Sociology/Elective

*Related Electives: Intro to Oral Communication/Advanced Speech, Business Management, Entrepreneurship/Internship, Personality Behavior and Relationships

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Best Buddies, Team Unified, Student Council, Key Club, Interact, Not In Our Town, Speech Team, Foreign Language Clubs, Social Studies Club, FCCLA, Culture Club

College Majors (examples) Community Health Services , Family Counseling , Mental and Social Health Services, Psychology, Social Work, Substance Abuse/Addiction Counseling

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Human Services

Preparing individuals for employment in career pathways that relate to families and human needs.

Sample Career Specialties / Occupations	• Directors, Childcare Facilities • Assistant Directors, Childcare Facilities • Elementary School Counselors • Preschool Teachers • Educators for Parents • Nannies • Teachers' Assistants • Childcare Assistants/Workers	• Clinical and Counseling Psychologists • Industrial-Organizational Psychologists • Sociologists • Career Coaches • School Counselors/Psychologists • Substance Abuse and Behavioral Disorder Counselors • Mental Health Counselors • Vocational Rehabilitation Counselors • Career Counselors • Career Facilitators • Employment Counselors • Residential Advisors • Marriage, Child and Family Counselors	• Community Service Directors • Adult Day Care Coordinators • Coordinators of Volunteers • Licensed Professional Counselors • Religious Leaders • Directors, Religious Activities/Education Programs • Human Services Workers • Social Services Workers • Vocational Rehabilitation Counselors • Employment Counselors • Career Counselors • Vocational Rehabilitation Service Workers • Leisure Activities Coordinators • Dieticians • Geriatric Service Workers • Adult Day Care Workers • Residential Advisors • Emergency and Relief Workers • Community Food Service Workers • Community Housing Service Workers • Social and Human Services Assistants	• Barbers • Cosmetologists, Hairdressers, & Hairstylists • Shampooers • Nail Technicians, Manicurists & Pedicurists • Skin Care Specialists/Estheticians • Electrolysis Technicians • Electrologists • Funeral Directors/Morticians • Embalmers • Funeral Attendants • Personal and Home Care Aides • Companions • Spa Attendants • Personal Trainers • Massage Therapists	• Consumer Credit Counselors • Consumer Affairs Officers • Consumer Advocates • Certified Financial Planners • Insurance Representatives • Bankers • Real Estate Services Representatives • Financial Advisors • Investment Brokers • Employee Benefits Representatives • Hospital Patient Accounts Representatives • Customer Service Representatives • Consumer Research Department Representatives • Consumer Goods or Services Retailing Representatives • Market Researchers • Account Executives • Sales Consultants • Event Specialists • Inside Sales Representatives • Field Merchandising Representatives • Buyers • Small Business Owners
Pathways	**Early Childhood Development & Services**	**Counseling & Mental Health Services**	**Family & Community Services**	**Personal Care Services**	**Consumer Services**
CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.				

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.

Pathway: Network Systems

Pathway Courses:

Year 1 – Computer Science Essentials / Technology Concepts

Year 2 – Computer Science Essentials / Technology Concepts

Year 3 - BACC Computer Technology & Networking I

Year 4 - BACC Computer Technology & Networking II

*Related Electives: Intro to Oral Communication/Advanced Speech, Principles of Engineering, AP Calculus, AP Chemistry, AP Computer Science Principles, AP Physics C, AP Statistics, Entrepreneurship/Internship, FBLA

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Math League, Scholastic Bowl, Tech Club, Girls Who Code, Drama Club Tech Crew, Speech Team, FBLA, Maker Club

College Majors (examples) Computer Engineering , Computer Information Systems , Computer Science , Information Technology , System Administration , Web page/Multimedia

Certifications Heartland: Computer Support Specialist, Computer Networking Windows, Computer Networking CISCO Academy

Pathway: Programming & Software Development

Pathway Courses:

Year 1 – Computer Science Essentials / Technology Concepts

Year 2 – Computer Science Essentials / Technology Concepts

Year 3 - AP Computer Science Principles

Year 4 - AP Computer Science A

*Related Electives: Intro to Oral Communication/Advanced Speech, Principles of Engineering, Graphic Design I & II, AP Calculus, AP Chemistry, AP Physics C, AP Statistics, Entrepreneurship/Internship

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Math League, Scholastic Bowl, Tech Club, Girls Who Code, Drama Club Tech Crew, Speech Team, FBLA

College Majors (examples) Artificial Intelligence and Robotics , Computer Information Systems , Computer Engineering , Computer Programming , Computer Science , Information Technology , System Administration , Webpage/Multimedia

Certifications Heartland: Computer Networking Windows, Computer Networking CISCO Academy

Pathway: Web & Digital Communications

Pathway Courses:

Year 1 - Computer Applications/Web Page Design

Year 2 - Animation & Rendering

Year 3 - Digital Media Production

Year 4 - Advanced Digital Media Production

*Related Electives: Intro Oral Communication/Advanced Speech, Business Management, Principles of Engineering, Graphic Design I & II, Entrepreneurship/Internship, Computer Science Essentials, AP Computer Science Principles, Desktop Publishing, Photography I & II, Drawing and Painting I & II

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Math League, Scholastic Bowl, Tech Club, Girls Who Code, Drama Club Tech Crew, Speech Team, FBLA

Certifications Heartland: Communication Graphics, Web Design Skills, Web Media Designer, Digital Imaging, and Digital Media Communication Core

CareerClusters™ PATHWAYS TO COLLEGE & CAREER READINESS
Information Technology

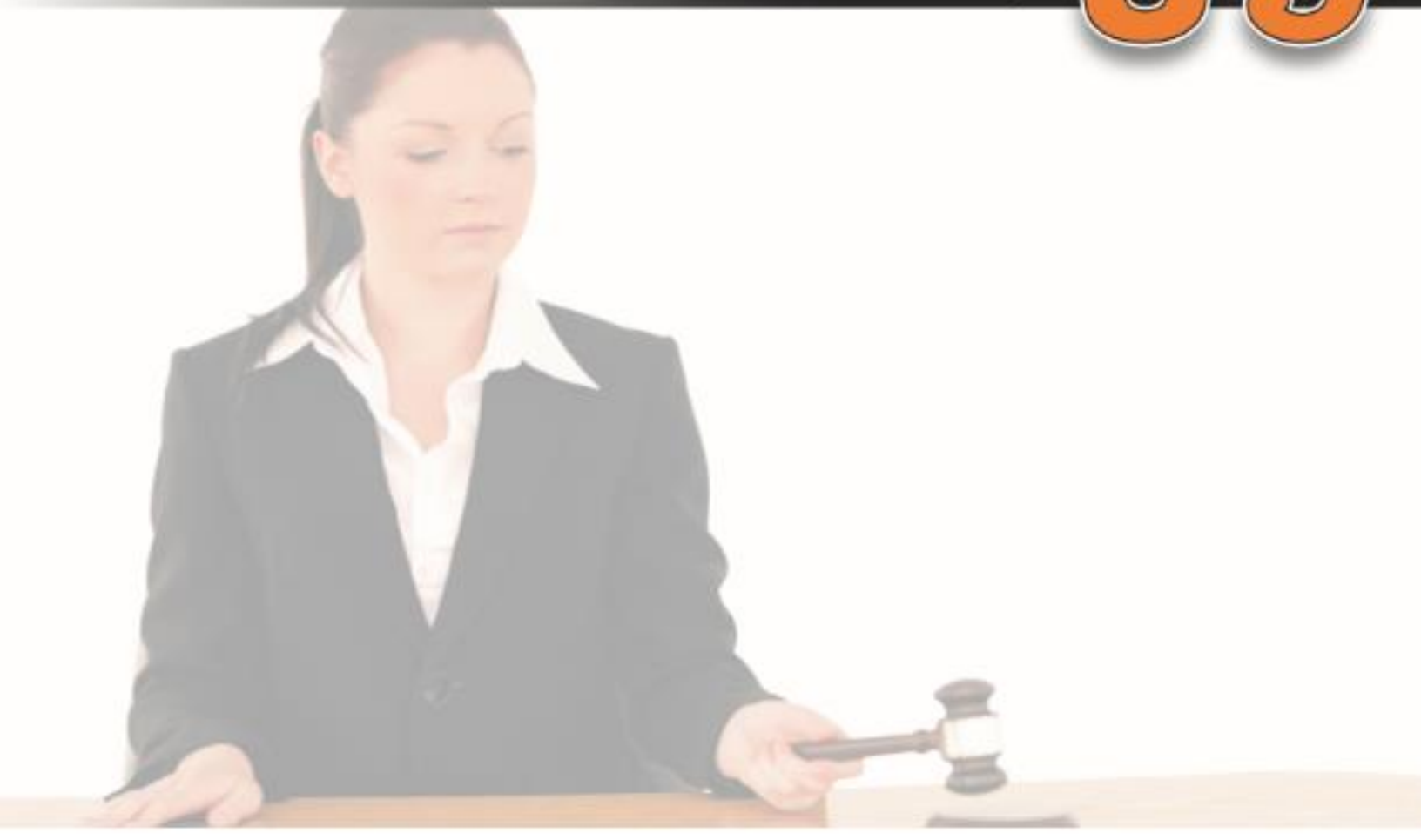
Building Linkages in IT Occupations Framework: For Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services.

Sample of Career Specialties / Occupations	Network Design and Administration: Communications Analyst * Data Communications Analyst * Information Systems Administrator * Information Systems Operator * Information Technology Engineer Network Consulting Engineer Network Pre-Sales Engineer Network: Administrator * Analyst * Architect * Engineer * Manager * Operations Analyst * Security Analyst * Specialist * Technician * Transport Administrator PC Support Specialist * Systems: Administrator * Engineer * Support Lead Technical Support Specialist * User Support Specialist Telecommunications Network Technician	Database Development and Administration: Data: Administrator * Analyst * Architect * Management Associate * Modeler * Modeling Specialist Database: Administration Associate * Administrator * Analyst * Developer * Manager * Modeler * Security Expert * DSS (Decision Support Services) * Knowledge Architect Senior: Database Administrator * Systems Analyst Systems: Administrator * Analyst Tester Technical Writer: Desktop Publisher * Document Specialist * Documentation Specialist * Editor Electronic Publications Specialist * Publisher Instructional Designer, Online Publisher Technical Communicator * Editor * Publications Manager * Writer Technical Support: Analyst * Call Center Support Representative * Content Manager Customer: Liaison * Service Representative * Service Professional Help Desk Specialist * Technician Maintenance Technician * PC Support Specialist * PC Systems Coordinator * Product Support Engineer * Sales Support Technician * Technical: Account Manager * Support Engineer * Support Representative Testing Engineer Enterprise Systems Analysis and Integration: Application Integrator * Business Continuity Analyst * Cross-Enterprise Integrator Data: Systems Designer * Systems Manager * Warehouse Designer E-Business Specialist * Electronic Transactions Implementer Information Systems: Architect * Planner Systems: Analyst * Architect * Integrator	Digital Media: 2D/3D Artist * Animator * Audio/Video Engineer * Designer * Media Specialist * Media/Instructional Designer Multimedia: Author * Authoring Specialist * Developer * Specialist Producer * Production Assistant * Programmer * Streaming Media Specialist * Virtual Reality Specialist Web: Designer * Producer * Specialist Web Development and Administration: Web: Administrator * Architect * Designer * Page Developer * Producer * Site Developer * Specialist Webmaster Web Developer Social Networking Specialist Blog Developer * Search Engine Marketing Specialist Search Engine Optimization Specialist	Programming / Software Engineering: Applications: Analyst * Engineer Business Analyst * Computer Engineer * Data Modeler Operating System: Designer/Engineer * Programmer Analyst Program Manager * Programmer * Programmer/Analyst * Project Lead Software Applications: Specialist * Architect * Design Engineer * Development Engineer * Engineer * QA Specialist * Tester Systems: Analyst * Administrator Test Engineer * Tester
Pathways	**Network Systems**	**Information Support and Services**	**Web and Digital Communications**	**Programming and Software Development**

CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.

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.

Pathway: Criminal Justice

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - Business Law/Elective

Year 3 - BACC Criminal Justice & Law Enforcement I

Year 4 - BACC Criminal Justice & Law Enforcement II

*Related Electives: Intro to Oral Communication/Advanced Speech, Personality Behavior & Relationships, Psychology, AP Psychology, Sociology, Foreign Language, AP Language, AP Literature

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Skills USA, Mock Trial, Speech Team, Student Council, Key Club, Interact, Social Studies Club, Speech Team

College Majors (examples) Corrections and Criminal Justice, Court Reporter, Forensic Science and Technology, Law, Legal Assistant/Paralegal

Certifications High School: CPR & AED

Certifications Heartland: Criminal Justice Corrections

Pathway: Emergency & Fire Management Services

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - BACC Health Careers & Medical Terminology

Year 3 - BACC Fire Science I

Year 4 - BACC Emergency Medical Technician

*Related Electives: Intro to Oral Communication/Advanced Speech, Business Law, Psychology, AP Psychology, Sociology

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Skills USA, Mock Trial, Speech Team, Student Council, Key Club, Interact, Speech Team, Social Studies Club

College Majors (examples) Fire Protection and Safety Technician, Fire Science/Firefighting, Fire Services Administration

Certifications High School: CPR & AED, Emergency Medical Care First Responder

Certifications Heartland: EMT Basic and EMT Paramedic

Pathway: Legal Services

Pathway Courses:

Year I - Introduction to Business

Year 2 - Business Law/Elective

Year 3 - Psychology/AP Psychology

Year 4 - Internship

*Related Electives: Intro to Oral Communication/Advanced Speech, AP English Language & Composition, AP Literature, Sociology, AP Government & Politics, Civic, Social Issues, Entrepreneurship, Foreign Language

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Skills USA, Mock Trial, Speech Team, Student Council, Key Club, Interact, Speech Team

College Majors (examples) Advanced Legal Research/Studies, Court Reporter, Law, Legal Assistant/Paralegal

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Law, Public Safety, Corrections & Security

Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.

Sample Career Specialties / Occupations	Warden• Jail Administrator• Mid-level Manager• Program Coordinator and Counselor• Public Information Officer• Correctional Trainer• Case Manager • Attorney • Community Corrections Practitioner• Probation/ parole officer• Corrections Educator• Corrections Officer• Detention Deputy• Detention and Deportation Officer• Case Manager Youth Services Worker• Facility Maintenance Workers• Transport Officer• Food Service Staff• Medical Staff• Dietitian• Support Staff	Emergency Management and Response Coordinator •Emergency Planning Manager•EMT•Fire Fighter•Mgr/Supv. of Fire Fighters•Forest Fire Fighter• Mgr/Supv. of Forest Fire Fighters•Forest Fire Inspector & Investigator•Hazardous Materials Responder •Emergency Dispatchers for Police, Fire and Ambulance •Training Officer •Grant Writer and Coordinator •Rescue Workers • Consequence Management Specialist • Surety Officer • Fire Protection Inspector • Paramedic (Licensed) • Training and Exercises Program Analyst • Canine Enforcement Officer (Training) • Fire Protection Engineer • Infrastructure Analyst Specialist • Operations Analyst • Program Specialist (National Security) • Program Specialist (Response, Preparedness, Recovery/Mitigation)	Security Director•Corporate/Agency Security Director/VP•Corporate Director of Sales•Security Systems Designer/Consultant•Physical Security Specialist Consultant•Student Trainee – Investigations •Computer Forensics specialist•Private/Corporate Investigator•Loss Prevention/Security Manager (e.g. Store, hotel)•Security Trainer/Educator•Security Sales Representative/Manager• Loss Prevention Specialist•Physical Security Assistant•Security Systems Technician (Install/maintain)•Investigative Assistant (private sector) •Security Trainer (Basics)•Canine Enforcement Officer• Transportation Security Supervisor•Information Security Assistant (Document Control)•Personnel Security Assistant•Executive Protection Officer (Private)• Supervisory Security officer (armed, unarmed)•Certified Security Officer (SPO, POST, Arrest Authority)•Armored Car Guard•Control Center Operator (e.g. ADT) (Monitoring Center)• Uniformed Security Officer (Unarmed -- proprietary and contract)•Security Clerk• Transportation Security Technician•Loss Prevention Assistant•Uniformed Security officer (armed)•Computer Security Specialist•Computer Forensics Examiner•Executive Protection Specialist•Gaming Surveillance Specialist•Information Security specialist•Information Technology Security•Armored Car Guards•Industrial Espionage Security•Life Guard, Ski Patrol, •Physical Property Security•Private Security Specialist •Infrastructure Analyst – Specialist •IT Specialist (Information Security) • Intelligence Research-Operations Specialist •Operations Analyst •Port Security Specialist •Transportation Security Screener	•Animal Control Officer •Bailiffs •Child Support •Missing Persons •Unemployment Fraud Investigators •Aircraft Operations Officer •Criminal Investigators & Special Agents • Adjudicator •Air Enforcement Officer •Gaming Investigator •Bomb Technician •Game Enforcement Officer •Highway Patrol Pilots •Immigration & Customs Inspectors •Mgr/Supv. Police & Detectives •Police Detectives and Criminal Investigators •Air Marshall •Police, Fire & Ambulance Dispatchers •Police & Patrol Officers •Private Detectives & Investigators •Sheriffs & Deputy Sheriffs •Training Officer •Transit & Railroad Police •Park Ranger •Evidence Technician •Federal Marshall •Border Patrol Agent •Canine Enforcement Officer •Customs and Border Protection Officer • Deportation Officer •Document Analyst • Fingerprint Identification Technician •Forensic Science Technician •Import Specialist •IT Specialist (Information Security) •Intelligence Research - Operations Specialist •Port Security Specialist •Marine Enforcement Officer	•Administrative Law •Attorney •Case Management Specialist •Court Reporter •File and Document Manager • Adjudicator •Information Officer • Student Trainee - Legal •Investigator •Judge • Asylum Officer – Hearings and Appeals •Law Clerk •Legal Assistant •Legal Secretary •Magistrate •Mediator/Arbitrator •Negotiator •Para legal
Pathways	**Correction Services**	**Emergency and Fire Management Services**	**Security & Protective Services**	**Law Enforcement Services**	**Legal Services**

CCTC /Career Ready Practices

The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.

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.

Pathway: Manufacturing Production

Pathway Courses:

Year 1 - Introduction to Engineering

Year 2 - MAP

Year 3 - Manufacturing Technology/Advanced Metalworking

Year 4 - Cabinetmaking/Machine Operations

*Related Electives: Intro to Oral Communication/Advanced Speech, Technology Concepts, Principles of Engineering, Agriculture Mechanical Technology, BACC Metalworking Occupation/Entrepreneurship/Internship

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Tech Club, Skills USA, Speech Team, Maker Club

College Majors (examples) Electronic Equipment Installation , Industrial Production Technologies , Machine Tool Technologies , Nuclear Power Technologies , Sheet Metal Technology , Tool and Die Technology , Welding Technology , Woodworking

Certifications Heartland: Industrial Technology (Welding, Construction, Design & Fabrication, Facilities Maintenance, Industrial Maintenance, Renewable Energy, and Electronics)

Pathway: Fashion Construction

Pathway Courses:

Year 1 - Fashion I & II

Year 2 - Housing & Interior Design I and II/Fashion III

Year 3 - Business Management/Elective

Year 4 - Internship

*Related Electives: Intro to Oral Communication/Advanced Speech, Entrepreneurship, Drawing and Painting I & II, Advanced Art, Photography

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, FCCLA, Drama Club Tech Crew, Speech Team

College Majors (examples) Apparel Technology, Textile Studies, Fashion Design, Fashion Studies, Fashion Merchandising

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Manufacturing

Planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.

Sample Career Specialties/Occupations	• *Assembler* • *Automated Manufacturing Technician* • *Bookbinder* • *Calibration Technician* • *Electrical Installer and Repairer* • *Electromechanical Equipment Assembler* • *Extruding and Drawing Machine Setter/Set-Up Operator* • *Extrusion Machine Operator* • *Foundry Worker* • *Grinding, Lapping, and Buffing Machine Operator* • *Hand Packers and Packager* • *Hoist and Winch Operator* • *Instrument Maker* • *Large Printing Press Machine Setter and Set-Up Operator* • *Machine Operator* • *Manager, Supervisor* • *Medical Appliance Maker* • *Milling Machine Setter, Set-Up Operator* • *Millwright* • *Operator, Tender, Cutter/Brazer, Solderer, Machine Operator* • *Painter* • *Pattern & Model Maker* • *Precision Layout Worker* • *Precision Optical Goods Worker* • *Production Associate* • *Sheet Metal Worker* • *Solderer and Brazer* • *Tool and Die Maker* • *Welder*	• *Design Engineer* • *Electrical and Electronics Technician and Technologist* • *Electronics Engineer* • *Engineering and Related Technician and Technologist* • *Engineering Technician* • *Industrial Engineer* • *Labor Relations Manager* • *Manufacturing Engineer* • *Manufacturing Technician* • *Power Generating and Reactor Plant Operator* • *Precision Inspector, Tester, and Grader* • *Process Improvement Technician* • *Production Manager* • *Purchasing Agent* • *Supervisor*	• *Biomedical Equipment Technician* • *Boilermaker* • *Communication System Installer/Repairer* • *Computer Installer/Repairer* • *Computer Maintenance Technician* • *Electrical Equipment Installer/Repairer* • *Facility Electrician* • *Industrial Electronic Installer/Repairer* • *Industrial Facilities Manager* • *Industrial Machinery Mechanic* • *Industrial Maintenance Electrician* • *Industrial Maintenance Mechanic* • *Industrial Maintenance Technician* • *Instrument Calibration and Repairer* • *Instrument Control Technician* • *Job/Fixture Designer* • *Laser Systems Technician* • *Maintenance Repairer* • *Major Appliance Repairer* • *Meter Installer/Repairer* • *Millwright* • *Plumber, Pipefitter and Steamfitter* • *Security System Installer/Repairer*	• *Calibration Technician* • *Inspector* • *Lab Technician* • *Process Control Technician* • *Quality Control Technician* • *Quality Engineer* • *SPC Coordinator*	• *Communications, Transportation and Utilities Manager* • *Dispatcher* • *Freight, Stock, and Material Mover* • *Industrial Truck and Tractor Operator* • *Logistical Engineer* • *Logistician* • *Material Associate* • *Material Handler* • *Material Mover* • *Process Improvement Technician* • *Quality Control Technician* • *Traffic Manager* • *Traffic, Shipping, and Receiving Clerk*	• *Environmental Engineer* • *Environmental Specialist* • *Health and Safety Representative* • *Safety Coordinator* • *Safety Engineer* • *Safety Team Leader* • *Safety Technician*
Pathways	**Production**	**Manufacturing Production Process Development**	**Maintenance, Installation & Repair**	**Quality Assurance**	**Logistics & Inventory Control**	**Health, Safety and Environmental Assurance**
CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.					

Marketing U5

Marketing

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

Pathway: Marketing

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - Accounting

Year 3 - Sports Entertainment & Marketing/Business Law

Year 4 – Graphic Design I & II

*Related Electives: Intro to Oral Communication/Advanced Speech, Business Management, Advanced Accounting, Economics, AP Calculus, AP Statistics, Desktop Publishing, Journalism, Introduction to Computer Programming, Entrepreneurship/Internship, Photography I & II, Agribusiness Management, AP Language

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, FBLA, Art Club, Speech Team, Class Board

College Majors (examples) Advertising, Fashion Merchandising, International Marketing, Marketing, Merchandising, Public Relations, Retail Operations, Sales/Distribution

Certifications Heartland: Communications Graphics, Digital Media Communication Core

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Marketing

Planning, managing, and performing marketing activities to reach organizational objectives.

Sample Career Specialties / Occupations	• Entrepreneurs • Owners • Small Business Owners • Presidents • Chief Executive Officers • Principals • Partners • Proprietors • Franchisees • Independent X's (e.g., distributor) • Customer Service Representatives • Administrative Support Representatives (e.g., human resources, clerical, finance, technical)	• Inbound Call Managers • Channel Sales Managers • Regional Sales Managers • Client Relationship Managers • Business Development Managers • Territory Representatives / Managers • Key Account Managers • National Account Managers • Account Executives • Sales Engineers • Sales Executives • Technical Sales Specialists • Retail Sales Specialists (big ticket) • Outside Sales Representatives • Industrial Sales Representatives • Manufacturer's Representatives • Salespersons • Field Marketing Representatives • Brokers • Agents • Field Representatives • Solutions Advisors • Sales/Marketing Associates • Telemarketers/Inside Sales Representatives • Customer Service Representatives • Administrative Support Representatives (e.g., human resources, clerical, finance, technical)	• Store Managers • Retail Marketing Coordinators • Merchandising Managers • Merchandise Buyers • Operations Managers • Visual Merchandise Managers • Sales Managers • Department Managers • Sales Associates • Customer Service Representatives • Clerks (e.g., stock, receiving, etc.) • Administrative Support Representatives (e.g, human resources, clerical, finance, technical)	• Advertising Managers • Public Relations Managers • Public Information Directors • Sales Promotion Managers • Co-op Managers • Trade Show Managers • Circulation Managers • Promotions Managers • Art/Graphics Directors • Creative Directors • Account Executives • Account Supervisors • Sales Representatives • Marketing Associates • Media Buyers/Planners • Interactive Media Specialists • Analysts • Contract Administrators • Copywriters • Research Specialists • Research Assistants • Customer Service Representatives • Administrative Support Representatives (e.g., human resources, clerical, finance, technical)	• Database Managers • Research Specialists / Managers • Brand Managers • Marketing Services Managers • Customer Satisfaction Managers • (Research) Project Managers • CRM Managers • Forecasting Managers • Strategic Planners, Marketing • Product Planners • Planning Analysts • Directors of Market Development • Database Analysts • Analysts • Research Associates • Frequency Marketing Specialists • Knowledge Management Specialists • Interviewers • Customer Service Representatives • Administrative Support Representatives (e.g., human resources, clerical, finance, technical)
Pathways	**Marketing Management**	**Professional Sales**	**Merchandising**	**Marketing Communications**	**Marketing Research**
CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.				

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.

Pathway: Engineering & Technology

Pathway Courses:

Year 1 - Introduction to Engineering

Year 2 - Principles of Engineering

Year 3 - Civil Engineering & Architecture

Year 4 - AP Physics/STEM Capstone

*Related Electives: Intro to Oral Communication/Advanced Speech, Technology Concepts, Biological Engineering, Introduction to Computer Programming, STEM Trig, AP Biology, AP Chemistry, Environmental Earth, AP Statistics, AP Calculus, AP Computer Science A, Entrepreneurship/Internship, BSAA I & II, Ag Mechanics

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Math Team/League, Tech Club, Girls Who Code, Scholastic Bowl, Speech Team, STEM Club, Maker Club

College Majors (examples) Aerospace Engineer , Agricultural Engineer , Biomedical Engineer , Chemical Engineer , Civil Engineer , Electrical Engineer , Engineering Technician , Industrial Engineer , Mechanical Engineer , Nuclear Engineer

Pathway: Science & Math

Pathway Courses:

Year 1 - Biology/Geometry

Year 2 - Chemistry/Algebra 2

Year 3 - Physics/Honors Pre-Calculus

Year 4 - AP Science/AP Calculus/AP Stats

*Related Electives: Intro to Oral Communication/Advanced Speech, 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

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Math Team/League, Tech Club, Girls Who Code, Scholastic Bowl, Speech Team

College Majors (examples) Anatomy/Physiology, Astronomy, Biology/Biological Sciences, Chemistry, Ecology, Geology/Earth Science, Physics

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Science, Technology, Engineering & Mathematics

Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.

Sample Career Specialties / Occupations	Aerospace Engineer* Aeronautical Engineer* Agricultural Engineer* Agricultural Technician* Application Engineer* Architectural Engineer* Automotive Engineer* Biomedical Engineer* Biotechnology Engineer* Chemical Engineer* Civil Engineer* Communications Engineer* Computer Engineer* Computer Hardware Engineer* Computer Programmer* Computer Science Technician* Computer Software Engineer* Construction Engineer* Consultant* Development Engineer* Drafter* Electrical Engineer* Electrician* Electronics Technician* Energy Transmission Engineer* Environmental Engineer* Facilities Technician* Fire Protection Engineer* Geothermal Engineer* Hazardous Waste Engineer* Hazardous Waste Technician* Human Factors Engineer * Industrial Engineer* Industrial Engineering Technician* Licensing Engineer* Manufacturing Engineer* Manufacturing Technician* Manufacturing Processes Engineer* Marine Engineer* Materials Engineer* Materials Lab & Supply Technician* Mechanical Engineer* Metallurgic Engineer* Mining Engineer* Naval Engineer* Network Technician* Nuclear Engineer* Ocean Engineer* Operations Research Engineer* Packaging Engineer* Packaging Technician* Petroleum Engineer* Pharmaceutical Engineer* Plastics Engineer* Power Systems Engineer* Product Design Engineer* Project Engineer* Project manager* Prototype Engineer* Quality Engineer* Quality Technician* Radio/TV Broadcast Technician* Radiology Engineer* Researcher* Safety Engineer* Software Engineer* Sound Technician* Structural Engineer* Survey Technician* Systems Design Engineer* Technical Sales Manager* Technical Writer* Telecommunications Engineer* Textile Engineer* Transportation Engineer* Nuclear Engineer and Procurement Engineer	Analytical Chemist* Anthropologist* Applied mathematician* Archeologist* Astronomer* Astrophysicist* Atmospheric scientist* Biologist* Botanist* CAD operator* Cartographer* Chemist* Communications technologist* Conservation scientist* Cosmologist* Cryptographer* Crystallographer* Demographer* Dye chemist* Ecologist* Economist* Electronmicroscopist * Environmental scientist* Expert systems scientist* Geneticist* Geologist* Geophysicist* Geoscientist* Herpetologist* Hydrologist* Ichthyologist* Inorganic chemist* Laboratory Technician * Mammalogist* Marine scientist* Materials analyst* Materials scientist* Mathematician * Mathematics* Metallurgist* Meteorologist* Microbial Physiologist* Mycologist* Nanobiologist* Nuclear chemists* Nuclear technician* Numerical analyst* Nutritionist* Oceanographer* Organic chemist* Ornithologist* Paleontologist* Physicist* Polymer scientist* Programmer* Protein scientist* Protozoologist* Quality-control scientist* Radio chemist* Research chemist* Research Technician* Science Teacher * Lab Technician* Scientific visualization / graphics expert* Spectroscopist* Statistician* Technical writer* Technologist* Toxicologist* Zoologist*
Pathways	**Engineering and Technology**	**Science and Math**
CCTC / Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.	

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.

Pathway: Facility & Mobile Equipment Maintenance

Pathway Courses:

Year 1 - Introduction to Business

Year 2 - Elective

Year 3 - BACC Automotive Technology I

Year 4 - BACC Automotive Technology II

*Related Electives: Introduction to Oral Communication/Advanced Speech, Introduction to Engineering Design, Technology Concepts, Agricultural Mechanical Technology, Accounting, Business Management

*See following page and choose electives depending on your pathway.

School Related Activities: Athletics, Skills USA, FBLA, FCCLA

College Majors (examples) 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

Certifications Heartland: Advanced Truck Driver

Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Sample of Career Specialties / Occupations	**Air/Space Transportation:** Transportation Managers (Air) * Commercial Pilots * Flight Engineers * Flight Attendants *Dispatchers (Air) * Traffic Managers * Air traffic Controllers *Aircraft Cargo Handling Supervisors * Airfield Operations Specialists **Rail Transportation:** Transportation Managers (Rail) * Dispatchers (Rail) * Traffic Managers * Locomotive Engineers * Locomotive Firers * Railyard Conductors and Yardmasters * Railroad Brake, Signal and Switch Operators * Railyard Engineers, Dinkey Operators, and Hostlers **Water Transportation:** Transportation Managers (Water) * Dispatchers (Water) * Traffic Managers * Captains * Mates * Pilots of Water Vessels * Sailors and Marine Oilers * Able Seamen * Ordinary Seamen * Ship and Boat Captains * Ship Engineers * Bridge and Lock Tenders **Road Transportation** Transportation managers (Road) * Dispatchers (Truck/Bus/Taxi) *Traffic Managers * Truck Drivers (Tractor-Trailer) * Truck Drivers (Light or Delivery Services) * Bus Drivers (Transit and Intercity) * School Bus Drivers * Taxi Drivers and Chauffeurs **Transit Systems:** Transportation Managers (Mass Transit) * Dispatchers (Bus) * Traffic Managers *Dispatchers (Rail) * Traffic Managers * Bus Drivers (Transit and Intercity) * Subway and Streetcar Operators	Logisticians * Logistics Managers * Logistics Engineers * Logistics Analysts * Logistics Consultants * International Logistics Specialists	Warehouse Managers * Storage and Distribution Managers * Industrial and Packaging Engineers * Traffic, Shipping and Receiving Clerks * Production, Planning, Expediting Clerks *First-line Supervisors/ Managers of Helpers * Laborers, and Material Movers (Hand) * First-line Supervisors /Managers of Transportation and Material (Moving Machine and Vehicle Operators) *Laborers and Freight, Stock and Material Movers (Hand) * Car, Truck and Ship Loaders * Packers and Packagers-hand	**Facility:** Facility Maintenance Managers and Engineers * Industrial Equipment Mechanics *Industrial Electricians, * Electrical/Electronic Technicians **Mobile Equipment:** General--Mobile Equipment Maintenance Managers * Electrical and Electronic Installers and Repairers (Transportation Equipment) * Mobile Heavy Equipment Mechanics Air/Space—Aerospace Engineering and Operations Technicians * Aircraft Mechanics and Service Technicians * Airframe Mechanics * Power plant Mechanics * Aircraft Engine Specialists * Avionics Technicians Water—Ship Mechanics and Repairers * Motorboat Mechanics * Automotive/Truck Mechanics and Body Repairers Rail—Rail Car Repairers * Signal and Track Switch Repairers * Rail Locomotive Mechanics and Repairers Road—Electronic Equipment Installers and Repairers (Motor Vehicle) * Automotive Body and Related Repairers * Automotive Service Technicians and Mechanics * Automotive Master Mechanics * Automotive Specialty Technicians * Bus and Truck Mechanics and Diesel Engine Specialists * Motorcycle Mechanics * Bicycle Repairers	General—Intermodal--Urban and Regional Planners * Civil Engineers * Engineering Technicians * Surveying and Mapping Technicians * Government Service Executives * Environmental Compliance Inspectors Air/Space—Air Traffic Controllers * Aviation Inspectors Road—Traffic Engineers * Traffic Technicians * Motor Vehicle Inspectors * Freight Inspectors Rail—Railroad Inspectors Water—Marine Cargo Inspectors * Vessel Traffic Control Specialists Transit—Public Transportation Inspectors Other---Regulators * Inspectors and other federal/state/local transportation agency jobs	Health and Safety Managers * Industrial Health and Safety Engineers * Environmental Scientists and Specialists * Environmental Science and Protection Technicians * Environmental Managers and Engineers * Environmental Compliance Inspectors * Safety Analysts	Marketing Managers, * Sales Managers * Sales Representatives of Transportation /Logistics Services * Reservation, Travel and Transportation Agents * Cargo and Freight Agents * Customer Service Managers * Cashiers, Counter and Rental clerks
Pathways	**Transportation Operations**	**Logistics Planning and Management Services**	**Warehousing and Distribution Center Operations**	**Facility and Mobile Equipment Maintenance**	**Transportation Systems/ Infrastructure Planning, Management, and Regulation**	**Health, Safety and Environmental Management**	**Sales and Service**
CCTC /Career Ready Practices	The **Common Career Technical Core** (CCTC) includes a set of standards for each of the 16 Career Clusters™ and their corresponding Career Pathways that define what students should know and be able to do after completing instruction in a program of study. The CCTC also includes an overarching set of **Career Ready Practices** that apply to all programs of study. The Career Ready Practices include12 statements that address the knowledge, skills and dispositions that are important to becoming career ready.						