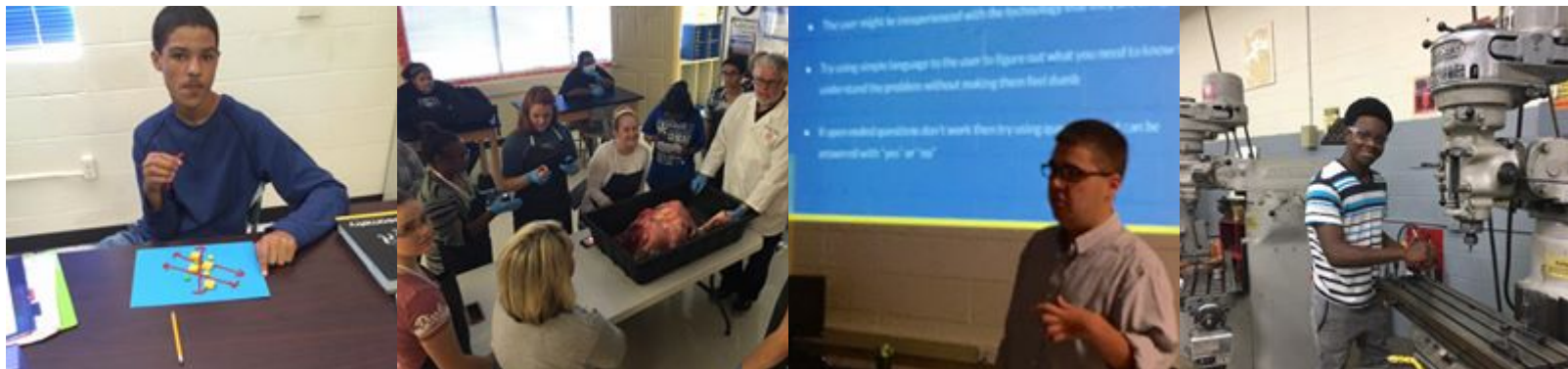


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“CREATING AN EDUCATIONAL CULTURE OF CONTINUOUS  
GROWTH THROUGH SHARED PARTNERSHIPS AND  
RESPONSIBILITIES.”

# GATEWAY ACADEMY

## TO INNOVATION & TECHNOLOGY



# Course Catalog & Scholar Handbook

# 2017-2018



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Welcome to Gateway Academy to Innovation & Technology! It is an honor to serve as your principal, and I invite you, through this guide, to explore the wonderful programs that are offered at Gateway Academy. I also challenge you to join us at Gateway Academy and begin your preparation for an ever- changing world of careers.

It is an exciting time in Career and Technical Education where education leaders and teachers are working diligently to offer scholars opportunities for successful careers. Gateway Academy offers opportunities for every scholar through rigorous engaging curriculums, Project-Based Learning (PBL), authentic learning experiences, and career guidance. Whether your plan is to go on to college or go straight to the professional world of work, Gateway Academy has a pathway for you.

We have high expectations for scholars and allow for experiences to let scholars shine. We challenge every scholar to employ critical thinking skills on a daily basis, set and pursue career goals, collaborate with peers in a team setting, practice soft skills, and network with community partners.

In addition to earning high school credit and completing the chosen pathway, scholars have a plethora of opportunities through the Gateway Academy experience. Many of our programs offer dual college credits and industry certifications. Preparatory seniors also have the opportunity to apply for Co-Op positions.

Gateway Academy scholars are also challenged to be involved in leadership experiences. Scholar Ambassadors, scholar organization officers, and competitors are just a few of the leadership roles where scholars have an opportunity to share their voice and form the direction for Gateway Academy.

Choose your pathway and fill out an application today. We anxiously await your arrival at Gateway Academy and can't wait to witness the fabulous ideas that you bring with you.

*Penny Knight*

Principal, Gateway Academy to Innovation and Technology

# Gateway Academy to Innovation & Technology Scholar Code of Acceptable Behavior

The staff of Gateway Academy works to provide a safe environment where scholars are empowered to think critically, make informed decisions, become leaders, and excel in the preparation of their chosen career. The following policies, procedures, and expectations are in place to ensure a safe, educational environment for all scholars and staff. Gateway Academy scholars are expected to be productive participants in their educational journey and abide by all school protocols.

## LEADERSHIP

Gateway Academy scholars have opportunities for leadership through the Scholar Ambassador Program and scholar organization officer teams. Scholar organizations include DECA ~ An Association of Marketing Scholars; HOSA ~ Health Occupation Scholars of America; SkillsUSA; and STLP ~ Student Technology Leadership Program. Scholars who excel in the areas of academics, attitude, and attendance have opportunities to be chosen as Scholar of the Month.

## INTERNSHIP/ COOPERATIVE EDUCATION

Scholars who successfully complete 3 courses in a pathway are eligible to apply for a Co-Opportunity. Applications may be obtained from the program instructor and must be submitted for approval by April 1 of the scholar's junior year.

## MEDICATION

Scholars requiring medication during their time at Gateway Academy should have appropriate paperwork on file with the home high school nurse, the Gateway front office, and provide prescription or parent note with instructions for administering the medication. Per district policy, scholars may not carry any type of medication with them during the school day. This includes aspirin and other over-the-counter medications.

## TECHNOLOGY

Scholars must follow the District Acceptable Use Policy for all technology use.

## EXPECTATIONS

Expectations/Rules are important for a school to maintain order. Gateway Academy abides by all district rules. Scholars are also held accountable to their individual actions. The following items will be fully enforced. We invite scholars and parents to assist us with maintaining a healthy,

uninterrupted school day.

## TRANSPORTATION

Scholars are expected to ride the bus from their home high school to Gateway Academy and back to their home high school each day. The only exception to this policy will be for scholars who co-op from Gateway Academy or attend a class at HCC immediately before or after their Gateway Academy class, and these exceptions will need to be approved by the administrative staff in advance.

For safety and liability concerns, scholars are not allowed to walk to Gateway Academy. Scholars must ride the provided bus from their home high school to Gateway and return to the home high school on the provided bus. At dismissal time, scholars must ride the bus back to their home high school or be picked up by a guardian that is listed on their Infinite Campus Summary page. Scholars who walk home from school are required to ride the bus from Gateway Academy to their home high school and be dismissed to walk home from the home high school.

## ELECTRONIC DEVICES

Electronic devices must be turned off and out of sight during the school day. Earbuds and/or head phones must be put away as well. Electronic devices are the main source of scholar inattention and the bulk of behavior referrals. At no time, should scholars be making calls, texting, listening to music, or playing games ~ even in the hallways or bathrooms. If a scholar needs to communicate with a parent, there are phones available in each classroom and the front office. If a scholar chooses to have an electronic device visible the following protocols are in place: The first offense is a warning with a minor referral and the scholar is asked to put the device away; the second offense, the teacher will ask for the device and complete a minor referral; the third offense, the principal will confiscate the device, a major referral will be completed, and a parent/guardian will be required to come in for a meeting to pick up the device. If a scholar refuses to submit an electronic device to a teacher or any school district employee, there will be an immediate behavior referral and, at least, one day in ICE.

**"I was texting my parent" or "my parent was texting me"** is not a valid excuse for using an electronic device during the school day. We expect parents and family members to be part of our team and assist with the adherence to the rules and protocols set forth to allow for uninterrupted instruction.

## **PROFANITY**

Profanity of any kind will not be tolerated. It is important for scholars to learn the soft skills necessary to function in a career. Profanity is not acceptable in the workplace or school. The use of profanity will result in a behavior referral.

## **DRESS CODE**

Safety and appropriateness are the main concerns for an organized dress code at Gateway Academy. We believe that scholar dress and overall appearance should foster a positive and productive work environment and should reflect pride in one's self as well as our school. The administration will make the final judgment on the appropriateness of clothing and/or appearance and reserves the right to prohibit scholars from wearing clothing and/or items that lead to the disruption of the instructional environment. Where relevant, scholars will be asked to dress as the profession they are preparing to enter, such as scrubs on certain days during nursing or biomedical classes. Several Gateway Academy Programs require special clothing to maintain safety. For example, scholars in Automotive Technology, Electrical Technology, Industrial Maintenance, or Welding labs are required to wear appropriate eye protection, safety clothing, and closed toe shoes. Specific dress code requirements can be found on the description page for each pathway that follows.

The following will be considered out of dress code and will result in the scholar being asked to correct the violation. If the scholar is unable to correct the violation, appropriate clothing will be provided or a guardian will be required to bring appropriate clothing to the scholar. "That's not how it is at my high school" or "I can wear this at my high school" are not valid excuses for breaking the Gateway Academy protocols. Time out of the classroom to correct a dress code violation is considered an unexcused absence. Zip-ties will be provided as an alternative for belts.

### **General**

Failure to dress appropriately during shop labs will result in the scholar not being able to participate in class, may result in a loss of participation points for the class period, and may result in a behavior referral.

### **Tops:**

- Tops should not expose midriff,

cleavage, undergarments or bare back.

- The following are unacceptable: muscle shirts, spaghetti strap/halter, mesh tops, see-through blouses or shirts, tube tops or crop tops.
- Welding scholars must wear appropriate safety clothing to be allowed in the lab area.

### **Pants, Shorts, Skirts, Skorts:**

- Pants, shorts, skirts, and skorts must be secured and worn no lower than the hip. Midriff and undergarments must be covered at all times.
- Shorts, skirts, skorts, and slits in skirts must touch the bottom of the fingertips with arms fully extended while the scholar is standing straight.
- Leggings must be appropriate and not see-through at the discretion of the administration.

### **Offensive Articles**

- Clothing or personal items that display sexually suggestive writing/pictures; advocate violence; advertise or promote the use of tobacco, alcohol, or drugs; have double-meaning wording or obscene language/gestures; display profanity; or are disrespectful to others are prohibited.

### **Footwear**

- Appropriate footwear must be worn at all times
- Any shoe that poses a safety hazard is not permitted ~ all shop classes require closed-toe shoes.

### **Headwear:**

- Headwear is not allowed inside the building.
- The only exception is teacher approved headwear during shop classes for safety purposes.

Please review the next page for our schoolwide behavior expectations and matrix.

**Gateway Academy to Innovation & Technology**  
**Gateway PRIDE**

Be **P**resent

Show **R**espect

Act with **I**ntegrity

Be **D**ependable

Make **E**thical Decisions

	Arrival	Hall	Bus	RR	ER Procedures	Classroom	Lab/Shop	Dismissal
<b>Present</b>	Smile ~ we are glad you are here 😊				Quickly move to designated location	Stay on Task, Be Engaged!	Safety first!	Be orderly
<b>Respect</b>	Enter the building with Voice Level 1	Voice Level 1	Be polite to driver and peers	Wash hands!!  Place used paper towels in trashcan	Voice Level 0  Listen to instructions	Listen to instructions  Follow classroom procedures	Self Others Materials Area	Teacher dismisses class ~ stay in assigned area until dismissed
<b>Integrity</b>	Enter building at appropriate door	Help keep the hallways clean	Pick up trash and belongings	Help keep the RR clean	Help others move to the designated location	Be kind! Be Courteous!  Make good choices!	Report any unsafe issues ~ wiring, tools, equipment, etc.	Ride the bus
<b>Dependable</b>	Be on time and engaged	Carry Hall Pass	Catch the bus on time	Flush	Follow instructions	Be on time and engaged	Keep areas clean and uncluttered  Tools in place	Work until dismissed
<b>Ethical</b>	Ride the bus	Obey electronic device policy	Make good choices	Make good choices	Make good choices	Make good choices	Report unsafe activity	Leave at appropriate time

Good behavior will be rewarded with Gateway PRIDE Perks that students may spend in the GatewayStore. Other rewards for not receiving any minors and/or majors will be determined by the PBIS committee and planned throughout the year.

# ACADEMY OF HOSPITALITY & TOURISM

## CULINARY & FOOD SERVICES CAREER PATHWAY

<p><b>PATHWAY DESCRIPTION</b> The Culinary &amp; Food Service pathway addresses a skill set necessary for success in the culinary industry. The courses in this pathway will help scholars develop skills in early career ladder positions and promote continuing education at the post-secondary level preparing for careers associated with restaurants, institutional food service, hospitality and catering, as well as food and beverage operations.</p>	<p><b>EXAMPLE CAREERS</b></p> <ul style="list-style-type: none"> <li>• Chef/Cook</li> <li>• Baker</li> <li>• Entrepreneur</li> <li>• Food Inspector</li> <li>• Butcher</li> </ul> <p><b>PROGRAM COMPLETION ASSESSMENT</b></p> <ul style="list-style-type: none"> <li>• KOSSA – Culinary Arts &amp; Food Services</li> <li>• Industry Certification – ServSafe &amp; ProStart</li> </ul>	<p><b>LAB AREA DRESS CODE</b></p> <ul style="list-style-type: none"> <li>• Gloves</li> <li>• Hair Nets</li> <li>• Aprons</li> </ul>
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Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
200113	FACS Essentials	9-10	1 credit/ All year		Taken at home high school
200441	Foods and Nutrition	10-11	1 credit/1 semester		
200442	Advanced Foods and Nutrition	10-11	1 credit/ 1 semester		Foods and Nutrition
200411	Culinary Arts I	11-12	1 credit/ 1 semester	BFS 106/ CUL 100	Advanced Foods and Nutrition
200412	Culinary Arts II	11-12	1 credit/1 semester	BFS 104/ CUL 230	Culinary Arts I
200409	Co-op: Culinary	12	1-2 credits / All		Successful completion of 3 courses, teacher recommendation, and district application.

**Foods and Nutrition** – This course is designed to assist scholars in making critical decisions about food, which contributes to health and well-being. Laboratory instruction is included as an application process. Practical problems addressed relate to attitudes toward food, nutrition facts, special health concerns and diets, management of food resources, preparation skills, food safety, sanitation and careers in nutrition and food service. Leadership development will be provided through the Family, Career and Community Leaders of America.

**Advanced Foods and Nutrition** – This course is designed to assist scholars in principles related to food preparation. Specific content addressed will include planning, serving, food presentation, special diets, and nutrition for the lifespan, serving, and food planning for entertainment services. An emphasis on careers related to food service and nutrition (i.e. catering, dietician, and other culinary careers). Lab instruction emphasizes the application process. Leadership development will be provided through the Family, Career and Community Leaders of America scholar organization.



**Culinary Arts I** – This advanced course allows scholars to increase competencies in a variety of food preparation techniques. Emphasis will be placed on food presentation, garnishing, menu planning and the skills necessary to prepare for a career in the culinary arts profession. Leadership development will be provided through the Family, Career and Community Leaders of America.

**Culinary Arts II** – In this course, scholars resume progress in pursuing competencies in food production and services. Orientation to the food service industry and development of food preparation skills are reinforced. Food service management functions are introduced. More in-depth information is provided and higher levels of skills are taught. Time is provided for work based learning opportunities. Leadership development will be provided through the Family, Career and Community Leaders of America.

**Co-Op: Culinary Arts** - This course provides supervised on-the-job work experience related to the scholar's educational objectives.

Scholars may participate in leadership opportunities through:

- Skills USA
- Work-based Learning
- School-based Enterprise



# ACADEMY OF HOSPITALITY & TOURISM

## HOSPITALITY, TRAVEL, TOURISM & RECREATION CAREER PATHWAY

PATHWAYDESCRIPTION	EXAMPLE CAREERS
A program that prepares individuals to provide direct retail services to hotel and motel clients and customers in a variety of settings. Includes instruction in the principles of hotel/motel operations, customer sales and assistance operations and techniques, telephone operations, and basic office management.	<ul style="list-style-type: none"> <li>• Hotel Desk Clerk</li> <li>• Hotel Manager</li> <li>• Concierge</li> <li>• Retail Salesperson</li> <li>• Retail Buyer</li> <li>• Bed and Breakfast Proprietor</li> <li>• Tour Guide</li> <li>• Travel Agent</li> <li>• Amusement and Recreation Attendant</li> </ul>
	<p>PROGRAM COMPLETIONASSESSMENT</p> <ul style="list-style-type: none"> <li>• KOSSA - Marketing</li> </ul>

Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
080716	Principles of Marketing	9-10	1 credit/ 1 semester	MKT 200	
080717	Advanced Marketing	9-10	1 credit/ 1 semester	MKT 102	Principles of Marketing
081511	Advertising and Promotion	10-11	1 credit/ 1 semester		Advanced Marketing
080911	Travel and Tourism Marketing	10-11	1 credit/ 1 semester	MKT 108	Advertising and Promotion
081411	Retail Marketing	11-12	1 credit/ 1 semester	MKT 103	Travel and Tourism Marketing
080310	Entrepreneurship	11-12	1 credit/ 1 semester	BAS 170	Retail Marketing
080708	Marketing Education Co- Op	12	1-2 credits / All		Successful completion of 3 courses, teacher recommendation, and district application.

**Principles of Marketing** – This course provides a basic foundation for further study in marketing. Scholars study economic functions at work in the marketplace, marketing functions including purchasing, pricing, and distribution function. This course is based on the business and marketing core that includes communication skills, economics, financial analysis, and promotion. Both marketing and employment skills learned will improve and increase the chance of successful transition into the world of work. Leadership development will be provided through DECA activities and competitive events.

**Advanced Marketing** – This course is designed to enhance marketing skills developed in the marketing prerequisite courses and to learn advanced marketing skills in such areas as advertising, customer service, supervision, and employee/employer relations for a wide range of marketing careers. This course is based on the business and marketing core that includes communication skills, emotional intelligence, economics, marketing, operations, promotion, marketing-information management and financial analysis. Leadership development will be provided through DECA activities and competitive events.

**Advertising and Promotion** – This course is designed to provide scholars with a realistic “hands-on” application of techniques used in the advertising and promotion of goods and services. Scholars use digital media (computer-generated text, graphics, photographs, sound and video) equipment, while being exposed to all forms of media (print, web page, etc.) used by industry. This course is based on the business and marketing core that includes communication skills, economics, financial analysis, product/service management and promotion. Leadership development will be provided through DECA.

**Travel and Tourism Marketing** – This course introduces the scholar to the travel and tourism industry. This course is based on the Business and Marketing Core that includes communication skills, economics, human resource management, promotion, marketing-information management, and selling. Instruction includes domestic and international travel, sales techniques, transportation methods (road, water, air, railway), food and beverage marketing, and destination marketing. Leadership development will be provided through DECA.

**Retail Marketing** – This course is designed to provide an overview of the marketing possibilities of individuals employed in the retail industry. This course is based on the business and marketing core that includes communication skills, operations, distribution, marketing-information management, pricing, product/service management, promotion and selling. The Kentucky Occupational Retail Services Skill Standards are integrated into this course giving scholars the opportunity to receive Retail Skill Standards Certification. Leadership development will be provided through DECA activities and competitive events.

**Entrepreneurship** – This course is designed to provide scholars the skills needed to effectively organize, develop, create and manage their own business. This course is based on the business and marketing core that includes communication skills, economics, financial analysis, operations, promotion and selling. The culminating project of the course is the development of a comprehensive business plan. Cooperative education or shadowing experiences may be used to enhance course instruction. Leadership development will be provided through DECA and/or FBLA.

**Marketing Education Co-Op** – Cooperative Education for CTE courses provide supervised worksite experience related to the scholar’s identified career pathway. A scholar must be enrolled in an approved capstone course during the same school year that the co-op experience is completed. Scholars who participate receive a salary for these experiences, in accordance with local, state and federal minimum wage requirements according to the Work Based Learning Guide.

Scholars may participate in leadership opportunities through:

- DECA
- Skills USA
- Work-based Learning
- School-based Enterprise/Gateway Store



# ELECTRICAL TECHNOLOGY

## CONSTRUCTION – ELECTRICAL – TRACK CAREER PATHWAY

<p><b>PATHWAYDESCRIPTION</b> A program that prepares individuals to apply technical knowledge and skills to lay out, cut, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in technical mathematics, framing, construction materials and selection, job estimating, blueprint reading, foundations and roughing-in, finish carpentry techniques, and applicable codes and standards. Each scholar must pass an End of Program assessment and complete 8 OSHA modules to be eligible to receive credit.</p>	<p><b>EXAMPLE CAREERS</b></p> <ul style="list-style-type: none"> <li>Electrical Engineer</li> <li>Electrical Engineering Tech</li> <li>Electrician</li> </ul> <p><b>PROGRAM COMPLETION ASSESSMENT</b></p> <ul style="list-style-type: none"> <li>KOSSA – Construction</li> <li>Industry Certification – Kentucky TRACK Pre-Apprenticeship Certification</li> </ul>	<p><b>LAB DRESS CODE</b></p> <ul style="list-style-type: none"> <li>Close-toed Shoes</li> <li>Safety Glasses</li> </ul>
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Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
460312	Electrical Construction I	9-11	1 credit/ 1 semester	EET 154/155	None
460313	Electrical Construction II	9-11	1 credits/ 1 semester	EET 252/253	Electrical Construction I
460316	Circuits I	9-11	1 credit/ 1 semester	ELT 110	
460319	Circuits II	9-11	1 credit/ 1 semester	ELT 114	Circuits I
460342	Renewable Energy Systems	11-12	1 credit/1 semester		Elec Con I/ Elec Con II/Circuits I/Circuits II
460377	Special Problems- Electrical Technology	11-12	1 credit/1 semester	EET 281	Renewable Energy Systems
460345	Co-Op(Electrical)	12	1-2 credits / All year	EET 299	Successful completion of 3 courses, teacher recommendation, and district application.
460348	Internship (Electrical)	12		EET 299	Successful completion of 3 courses, teacher recommendation, and district application.

**Electrical Construction I** - Involves the study of materials and procedures used in construction wiring.

**Electrical Construction II** – Expands the knowledge and skills needed to work in commercial and industrial construction wiring.

**Circuits I** – Introduction to basic theory of DC and AC circuits, including circuit analysis techniques, introductory magnetism, and transformer principles.

**Circuits II** - Complex alternating current and direct current circuits. Emphasis is on impedance, reactance, power and electrical energy, electrical measurement instruments, and circuit analysis.

**Renewable Energy Systems** – Examines the need for alternative and renewable energy resources as a survey course providing citizens from all walks of life an understanding for responsible stewardships of technologies that will contribute to the sustainability of energy in our present and future societies. The object of this course is to take a more in-depth look at renewable energy forms and the replacement of fossil fuels in our society. Through wind, solar, and biomass this class will focus on live projects and scientific studies and comparisons of feasibility.

**Special Problems** – A course designed for the scholar who has demonstrated specific special needs.

**Co-Op (Electrical)** – This course provides supervised on-the-job work experience related to the scholar’s educational objectives. Scholars participating in the Cooperative Education program receive compensation for their work.

**Internship (Electrical)** – Internship provides supervised on-the-job work experience related to the student’s educational objectives.

Scholars may participate in leadership opportunities through:

- Skills USA
- Apprenticeship with local industry partners



# HEALTH SCIENCE ACADEMY

## ALLIED HEALTH CAREER PATHWAY

<b>PATHWAY DESCRIPTION</b> A program that prepares individuals for admission to a professional program in Nursing.	<b>EXAMPLE CAREERS</b> <ul style="list-style-type: none"> <li>• License Practical Nurse</li> <li>• Nurse</li> <li>• Nurse Practitioner</li> <li>• Nursing Assistant</li> <li>• Physician’s Assistant</li> <li>• Doctor</li> </ul> <b>PROGRAM COMPLETIONASSESSMENT</b> <ul style="list-style-type: none"> <li>• KOSSA – Allied Health</li> <li>• Industry Certification – Medicaid Nurse Aide</li> <li>• Industry Certification – Acute Care (Pending Pilot Approval by KDE)</li> </ul>	<b>LAB DRESS CODE</b> <ul style="list-style-type: none"> <li>• Scrubs (On dates instructed)</li> </ul>
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**Scholars enrolled in courses below will be enrolled in the Health Science Academy and will take their English and science courses at Gateway Academy. The English and science courses are listed under “Core Content Courses” in this section.**

Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
170111	Principles of Health Science	9	1 credit/1 year	AHS 105	None
170141	Emergency Procedures	10	½ credit/1 semester		Principles of Health Science
170131	Medical Terminology I	10	½ credit/1 semester	AHS 120	Emergency Procedures
170167	Body Structures and Functions	11	1 credit/1 year		Emergency Procedures and Medical Terminology I
170631	Medicaid Nurse Aide	12	1 credit	MNA 100	<ul style="list-style-type: none"> <li>• Body Structures and Functions</li> <li>• Clear discipline report</li> <li>• 17 years old by 1/01/2018</li> </ul>
170501	Allied Health Core Skills OR Acute Care (Pending Pilot Program Approval from KDE)	12	1 credit		<ul style="list-style-type: none"> <li>• Principles of Health Science</li> <li>• Emergency Procedures &amp; Medical Terminology</li> <li>• Body Structures &amp; Functions</li> </ul>
170601	Co-Op Nursing	12	1-2 credit(s)/1 year		Medicaid Nurse Aide

**Principles of Health Science:** This course is an orientation to the Health Care Industry. It is designed to develop and enhance an understanding of the roles and responsibilities of each career major area. Upon successful completion of this course, the scholar will be able to focus on a career major path and make informed decisions regarding choices for continuing education and/or employment.

**Emergency Procedures:** Emergency Procedures is designed to teach cardiopulmonary resuscitation (Adult/Infant/Child) using current emergency techniques relative to cardiac and/or respiratory arrest, as put forth by the American Heart Association. The course focuses on prevention of disease/emergency scenarios, and professional response to a variety of situations.

**Medical Terminology I:** An overview designed of the basic techniques of medical word building is provided. Once these techniques have been developed, they can be applied to acquire an extensive medical vocabulary. Emphasis is on basic anatomical, physiological, pathology, diagnostic procedures, and pharmacological terms.

**Body Structures and Functions:** This course is designed to provide knowledge of the structure and function of the human body with an emphasis on normalcy. The interactions of all body systems in maintaining homeostasis will promote an understanding of the basic human needs necessary for health maintenance. Academic knowledge from life science core content as it relates to the human body will be included.

**Medicaid Nurse Aide:** Specific knowledge and skills for scholars and/or nurse aides to assume the role and responsibility required in long-term care is communicated to the scholar through lectures, lab, and clinical practice. The focus of the course is communication, infection control, safety, residents' rights, and basic nursing skills. Upon successful completion of the course, scholars are eligible to take the Kentucky Board of Nursing, Nursing Assistant test and receive 3 hours of college credit.

**Allied Health Core Skills:** Designed to provide knowledge, concepts and psychomotor skills necessary for gainful employment as an entry-level health care worker. Assisting students in selecting a career major, classroom instruction and educational objectives are combined with learning experiences, observations, and a work-based learning opportunity such as internship, shadowing, or clinical rotation. This course is designed for students not enrolled in the Medicaid Nurse Aide program.

**Acute Care:** At the time of publication, there was no course description available for this pilot course.

**Co-op Nursing:** Cooperative Education provides supervised on-the-job work experience related to the scholars' education objectives in the healthcare field. Scholars participating in the Cooperative Education program receive compensation for their work.

### Core Content Courses

Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
<b>English Courses</b>					
230107	Pre-AP English I	9	1 credit/1 year		None
230110	Pre-AP English II	10	1 credit/1 year		Pre-AP English I
230166	AP English Language & Composition	11	1 credit/1 year		Pre-AP English II
230116	Pre-AP English IV	12	1 credit/1 year		AP English III
230169	English 101(KCTCS)	12	1 credit/1 Semester	ENG 101	AP English III and ACT Score of 18 in English
230169	English 102(KCTCS)	12	1 credit/1 Semester	ENG 102	English 102(KCTCS)
<b>Science Courses</b>					
303091	Pre-AP Integrated Science	9	1 credit/1 year		None
302603	Pre-AP Biology	10	1 credit/1 year		Pre-AP Integrated Science
304527	Pre-AP Chemistry	11	1 credit/1 year		Pre-AP Biology
302699	Special Topics: Life Science	12	1 credit/1 year		Pre-AP Chemistry

Scholars may participate in leadership opportunities through:

- HOSA
- Skills USA
- Clinical Rotations

# HEALTH SCIENCES

## BIOMEDICAL SCIENCES CAREER PATHWAY PROJECT LEAD THE WAY (PLTW)

PATHWAYDESCRIPTION	EXAMPLE CAREERS	DRESS CODE
<p>A general program that focuses on the integrative scientific study of biological issues related to health and medicine, or a program in one or more of the biomedical sciences that is undifferentiated as to title. Includes instruction in any of the basic medical sciences at the research level; biological science research in biomedical facilities; and general studies encompassing a variety of the biomedical disciplines.</p> <p>Scholars may participate in leadership opportunities through:</p> <ul style="list-style-type: none"> <li>• HOSA</li> <li>• Skills USA</li> </ul>	<ul style="list-style-type: none"> <li>• Biologist</li> <li>• Biomedical Engineer</li> <li>• Biotechnologist</li> <li>• Coroner</li> <li>• Doctor</li> <li>• Forensic Scientist</li> <li>• Nurse</li> <li>• Pharmacist</li> <li>• Surgeon</li> </ul> <p>PROGRAM COMPLETIONASSESSMENTS</p> <ul style="list-style-type: none"> <li>• KOSSA – Allied Health</li> <li>• Phlebotomy</li> <li>• EKG Certification</li> <li>• Lab Technician</li> </ul>	<ul style="list-style-type: none"> <li>• No open-toed shoes</li> <li>• Lab Coats (Purchased sophomore year for approximately \$27)</li> </ul>

**\*\*Classes must be taken in the order listed and receive a C or better.\*\***

Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
170701	Principles of Biomedical	9-10	2 credits/ 1 year		None
170702	Human Body Systems (PLTW)	10-11	2 credits/ 1 year		Principles of Biomedical Sciences
170703	Medical Interventions (PLTW)	11-12	2 credits/ 1 year	BIO 118	Human Body Systems
170704	Biomedical Innovations (PLTW)	12	2 credits/ 1 year		Medical Interventions

**Principles of Biomedical Sciences-** Scholar work involves the study of human medicine, research processes and an introduction to bioinformatics. Scholars investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. A theme through the course is to determine the factors that led to the death of a fictional person.

**Human Body Systems-**Scholars will engage in the study of the processes, structures, and interactions of the human body system. Important concepts in this course include: communication, transport of substances, locomotion, metabolic processes, defense, and protection. The central theme is how the body systems work together to maintain homeostasis and good health. Scholars will design experiments, investigate the structures and functions of body systems, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiratory operations.

**Medical Interventions-**Scholar projects will investigate various medical interventions that extend and improve quality of life, including gene therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Scholars will study the design and development of various medical interventions including vascular stents, cochlear implants, and prosthetic limbs.

**Biomedical Innovations-**This capstone course gives scholars the opportunity to work with a mentor, identify a science research topic, conduct research, write a scientific paper, and defend team conclusions and recommendations to a panel of outside reviewers. Each team will have one or more mentors from the scientific and/or medical community guiding their scientific research.



# INDUSTRIAL MAINTENANCE TECHNOLOGY

## IMT TRACK CAREER PATHWAY

<p><b>PATHWAYDESCRIPTION</b></p> <p>The Industrial Maintenance Manufacturing TRACK is designed as a pre-apprenticeship pathway for technical scholars to enter industry. Through the collaboration of local industry, technical school, program instructor, scholar, and parents, a pre-apprenticeship agreement is signed. Local industry chooses 4 courses related to the required skills that will prepare the scholar to enter a four-year apprenticeship sponsored by the company.</p>	<p><b>EXAMPLE CAREERS</b></p> <ul style="list-style-type: none"> <li>• Maintenance Machinist</li> <li>• Maintenance Mechanic</li> </ul> <p><b>PROGRAM COMPLETIONASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• KOSSA – Manufacturing</li> <li>• Industry Certification – Kentucky TRACK Apprenticeship Certification</li> <li>• Industry Certification - NIMS National Institute for Metalworking Skills</li> </ul>	<p><b>SHOP AREA DRESS CODE</b></p> <ul style="list-style-type: none"> <li>• Safety Glasses</li> <li>• Close-Toed Shoes</li> <li>• No Jewelry</li> <li>• No V-Neck Tops</li> </ul>
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Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
470921	Blueprint Reading for Machinists	9-10	1 credit/1 semester	BRX 112	
470318	Maintaining Industrial Equipment	9-10	1 credit/1 semester	IMT 150/IMT 151	Blueprint Reading for Machinists
470313	Fundamentals of Machine Tool – A (for Maintenance)	10-11	1 credit/1 semester	CMM 110	Maintaining Industrial Equipment
470314	Fundamentals of Machine Tool – B (for Maintenance)	10-11	1 credit/1 semester	CMM 112	Fundamentals of Machine Tool – A (for Maintenance)
470322	Industrial Maintenance Electrical Principles	11-12	1 credit/All year	IMT 110/IMT 111/ EET 119	Fundamentals of Machine Tool – B (for Maintenance)
470308	Junior Apprenticeship	11-12	1-3 credits / All		Hiring process will be done by companies participating in TRACK program.
470336	Special Topics – Industrial Maintenance Technology	12	1 credit/All year		Successful completion of Junior Apprenticeship and instructor permission.
470305	Senior Apprenticeship	12	1-3 credits / All		Hiring process will be done by companies participating in TRACK program.

**Blueprint Reading for Machinists** – Blueprint Reading for Machinists provides the scholar with a beginning and advanced series of lectures, demonstrations, and practice exercises in the study of prints. Safety will be emphasized as an integral part of this course.

**Maintaining Industrial Equipment** – This course is designed to introduce the scholar to maintenance techniques and procedures used to maintain industrial equipment.

**Fundamentals of Machine Tool – A (for Maintenance)** – This course provides the basic principles needed for a solid foundation in machine tool technology. Areas and machines covered include shop safety, bench-work, drill press, power saw, measurement, mills, and lathes.

**Fundamentals of Machine Tool – B (for Maintenance)** – This course provides the basic principles needed for a solid foundation in machine tool technology. Areas and machines covered include shop safety, bench work, drill press, power saw, measurement, mills, and lathes.

**Industrial Maintenance Electrical Principles** – This course introduces the theory of electricity and magnetism and the relationship of voltage, current, resistance, and power in electrical circuits. The course is designed to develop an understanding of alternating and direct current fundamentals. Scholars will apply formulas to analyze the operation of AC and DC circuits.

**Industrial Maintenance Technology** – Special topics is designed to enhance a scholar’s understanding of problem solving in industrial situations. It expands on the task lists that have already been taught to the scholar in previous industrial maintenance courses.

**Junior & Senior Apprenticeships** – This course provides supervised on-the-job work experience related to the scholar’s educational objectives. The hiring process will be completed by the companies participating in the TRACK program and will be competitive.

Scholars may participate in leadership opportunities through:

- Skills USA
- Apprenticeship with local industry partners



# INFORMATION TECHNOLOGY

## DIGITAL DESIGN AND GAME DEVELOPMENT CAREER PATHWAY

PATHWAYDESCRIPTION	EXAMPLE CAREERS
<p>The digital design/gaming pathway courses provide scholars with a thorough understanding of techniques for designing advanced 3D games and simulations. The courses will cover 2D and 3Dgraphics, animation, character development, texturing, scripting, program design and coding, and game setup using state-of-the- art software development tools.</p> <p>Completing scholars will have developed the skills necessary to create 3D graphics and simple applications that can be used for games and simulations.</p>	<ul style="list-style-type: none"> <li>Internet Project Manager</li> <li>IT Education Teacher</li> <li>Web Animator</li> <li>Design Artist</li> <li>Cartoonist</li> <li>Game Designer</li> <li>Game Designer Analyst</li> <li>Webmaster</li> <li>Web Developer</li> <li>Web Graphic Designer</li> </ul> <p style="text-align: center;">PROGRAM COMPLETIONASSESSMENT</p> <ul style="list-style-type: none"> <li>Industry Certification –Microsoft Technical Associate – Gaming Development Fundamentals</li> </ul>

Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
060112	Digital Literacy	9-10	1 credit/ All year	CIT 105	Taken at home high school
110251	Computational Thinking	10-11	1 credit/1 semester	CIT 120	Digital Literacy
110101	Computer Hardware and Software Maintenance	10-11	1 credit/1 semester	CIT 111	Computational Thinking
110201	Programming Introduction	11-12	1 credit/1 semester		Computer Hardware and Software Maintenance
113605	Game Design Principles	11-12	1 credit/1 semester		Programming Introduction
113601	Introduction to Digital3D Game Graphics	12	1 credit/1 semester	DGD 132	Game Design Principles
113603	Advanced 3DGame Development	12	1 credit/1 semester	DGD 232	Introduction to Digital3D Game Graphics

**Computational Thinking** – Scholars analyze the structure of the worldwide web, apply basic principles of web documents and HTML, and develop multi-media web pages. Course content will include the understanding of hypertext and web structures. Equipment such as scanners, digital and video cameras and sound recording devices will be utilized through hands-on instruction. Promotes understanding of computer programming and logic by teaching scholars to “think like a computer.” Covers skills needed to develop and design language-independent solutions to solve computer related problems. Covers developmental and design basics including use of variables, control and data structures, and principles of command-line and object-oriented languages.

**Computer Hardware and Software Maintenance** – Focuses on the design of computing systems, including instruction in the principles of computer hardware and software components, algorithms data basis, telecommunications, etc. Includes the knowledge to identify and explain PC components, setup a basic PC workstation, conduct basic software installation, identify compatibility issues and recognize/prevent basic security risks and also gives knowledge in the areas of Green IT and preventative maintenance of computers.

**Programming Introduction** – Focuses on the general writing and implementation of generic and atomized programs to drive operating systems. Includes software design, languages, and program writing, troubleshooting, etc. Introduces scholars to fundamental programming concepts using an industry-specific or emerging programming language. Includes data types, control structures, simple data structures, error-handling, modular programming, information and file processing, and uniqueness of the language used in the course.

**Game Design Principles** – This course is an introduction to Game Design and Gaming. The course provides an overview of story development, gaming history, game reviews, current gaming trends and industry software. Scholars will begin to create and develop a game story/plot that can be further developed in higher level courses as well as critique current games. In addition, 2D game development software and image manipulation will be explored to further enhance their design skills. Career exploration into game design will be researched and gain awareness of job and post-secondary opportunities.

**Introduction to Digital 3D Game Graphics** – This course will focus on creating games using code, animation, and an introduction to 3D design software utilized in the industry. In addition, scholars will see how the skills and knowledge acquired in Game Design Principles come together utilizing a game engine. Emphasizes creating 3D graphics using one or more state-of-the-art software packages. Provides scholars with a thorough understanding of techniques for designing advanced 3D games and simulations. Courses will cover 2D and 3D graphics, animation, character development, texturing, rigging, scripting, and game setup using state-of-the-art software development tools.

**Advanced 3D Game Development** – Emphasizes creating 3D graphics using one or more state-of-the-art software packages. Provides scholars with a thorough understanding of techniques for designing advanced 3D games and simulations. Courses will cover 2D and 3D graphics, animation, character development, texturing, rigging, scripting, and game setup using state-of-the-art software development tools.

Scholars may participate in leadership opportunities through:

- STLP
- Skills USA



# INFORMATION TECHNOLOGY

## INFORMATION SUPPORT AND SERVICES CAREER PATHWAY

PATHWAYDESCRIPTION	EXAMPLE CAREERS
<p>The Information Support and Services pathway focuses on the design of computing systems. The courses include instruction in the principles of computer hardware and software components, algorithm databases, telecommunications etc.</p> <p>Scholars may participate in leadership opportunities through:</p> <ul style="list-style-type: none"> <li>• STLP</li> <li>• Work-based Learning</li> </ul>	<ul style="list-style-type: none"> <li>• Computer Technician</li> <li>• Customer Service Representative</li> <li>• Data Entry Technician</li> <li>• Electronics Technician</li> <li>• Quality Assurance Tester</li> <li>• Technical Support</li> <li>• Help Desk Associate</li> <li>• Technical Writing Clerk</li> </ul> <p style="text-align: center;">PROGRAM COMPLETIONASSESSMENT</p> <ul style="list-style-type: none"> <li>• KOSSA – Information Support &amp; Services</li> </ul>

Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
060112	Digital Literacy	9-10	1 credit/ All year	CIT 105	Taken at home high school
110251	Computational Thinking	10-11	1 credit/ 1 semester	CIT 120	Digital Literacy
110101	Computer Hardware and Software Maintenance	10-11	1 credit/ 1 semester	CIT 111	Computational Thinking
110102	Help Desk Operations	11-12	2 credits/ All year	CIT 232	Computer Hardware and Software Maintenance
110302	Management of Support Services	12	2 credits/ All year		Help Desk Operations

**Computational Thinking** – Scholars analyze the structure of the worldwide web, apply basic principles of web documents and HTML, and develop multi-media web pages. Course content will include the understanding of hypertext and web structures. Equipment such as scanners, digital and video cameras and sound recording devices will be utilized through hands-on instruction. Promotes understanding of computer programming and logic by teaching scholars to “think like a computer.” Covers skills needed to develop and design language-independent solutions to solve computer related problems. Covers developmental and design basics including use of variables, control and data structures, and principles of command-line and object-oriented languages.

**Computer Hardware and Software Maintenance** – Focuses on the design of computing systems, including instruction in the principles of computer hardware and software components, algorithms data basis, telecommunications, etc. Includes the knowledge to identify and explain PC components, setup a basic PC workstation, conduct basic software installation, identify compatibility issues and recognize/prevent basic security risks and also gives knowledge in the areas of Green IT and preventative maintenance of computers.

**Help Desk Operations** – Introduces a variety of tools and techniques to provide user support in help desk operations. Explores help desk concepts, customer service skills, troubleshooting problems, writing for end users, help desk operations and software, needs analysis, facilities management, and other topics related to end user support.

**Management of Support Services** – Digitally organizing the information technology and information and support services milestones achieved by the scholar that is reflective of their industry certification readiness, understanding the cost of doing business and preparation of technical and behavioral job performances i.e. interviews. The course also focuses on employability skills to include: a professional digital portfolio that emphasizes critical milestones focusing on entry level information technology technical and employability skills.

# LAW AND PUBLIC SAFETY

## LAW ENFORCEMENT SERVICES CAREER PATHWAY

PATHWAY DESCRIPTION	EXAMPLE CAREERS	DRESS CODE
<p>Law Enforcement Services prepares individuals to perform the duties of police and public security officers, including patrol and investigative activities, traffic control, crowd control and public relations, witness interviewing, evidence collection and management, basic crime prevention methods, weapon and equipment operation and maintenance, report preparation, communicating with the public, and other routine law enforcement responsibilities.</p>	<ul style="list-style-type: none"> <li>• Correctional Officer</li> <li>• Crime Scene Investigator</li> <li>• Criminologist</li> <li>• Detective</li> <li>• Police Officer</li> <li>• Private Investigator</li> <li>• Probation/Parole Officer</li> <li>• Security Guard</li> </ul> <p>PROGRAM COMPLETION ASSESSMENTS</p> <ul style="list-style-type: none"> <li>• Industry Certification – National Association of Emergency Dispatchers</li> </ul>	<ul style="list-style-type: none"> <li>• Polo Shirt with Khakis worn once a week on indicated day</li> <li>• During Physical Training course, appropriate workout clothes (shorts and t-shirt) will be needed.</li> </ul>

Course Number	Course Name	Grade	Credit/ Length of Course	Prerequisite
460144	Introduction to Criminal Justice	9-10	1 credit/ 1 semester	
461045	Law Enforcement	9-10	1 credit/1 semester	Introduction to Criminal
461043	Criminal Investigation	10-11	1 credit/ 1 semester	Law Enforcement
461013	Emergency Management	10-11	1 credit/ 1 semester	Criminal Investigation
461039	Terrorism and Counterterrorism Operations	11-12	1 credit/1 semester	Emergency Management
461011	Basic Telecommunications	11-12	1 credit/1 semester	Terrorism and Counterterrorism Operations
461038	Introduction to Homeland Security	12	1 credit/1 semester	Basic Telecommunications
461099	Health and Well-Being for Law Enforcement	12	1 credit/1 semester	Introduction to Homeland Security

**Introduction to Criminal Justice** – This course studies the history and philosophy of criminal justice, ethical considerations, definition of crime, the nature and impact of crime, an overview of the criminal justice system including law enforcement, corrections, and the court systems.

**Law Enforcement** – This course trains students to evaluate the powers granted to the police and restrictions placed upon them by respective constitutions and their amendments. Specific topics of discussion will include search and seizure, arrests, interviews, interrogations, and confessions in the context of criminal prosecution. Activities include tactics, methods, and skills utilized in the law enforcement field. Skills will be obtained in basic disaster response.

**Criminal Investigation** – This course includes investigative theory; collection and preservation of evidence, and sources of information; procedures for conducting interviews and interrogations; using forensic sciences; and preparing for cases and trials.

**Emergency Management** – This course focuses on the application of the incident command system model to formulating and implementing effective response to natural and man-made disasters. Includes instruction in contingency planning, hazard and risk assessment, joint operations, law and ethics, emergency response and recovery, event mitigation, emergency rescue and medical operations, incident command, terrorism and national security issues, law enforcement, relief administration, volunteer and citizen coordination, public relations and applications to specific types of incidents.

**Terrorism and Counterterrorism Operations** – This course focuses on the study of terrorism as a global and national threat and the methods for analyzing and countering it. Includes instruction in psychology, cultural studies, terrorist history and organization, terrorist capabilities, terrorist finance and international money-laundering, threat assessment, intelligence operations, incident command systems, border security, emergency response, joint operations, surveillance and communications systems, cyberterrorism, weapons of mass destruction, counterterrorist operations, and applications to specific terrorist organizations and threats.

**Basic Telecommunications** – This course is a study of basic emergency communications and of the federal and state laws that govern these communications; telephone and radio communications systems; communication documentation; emergency management; 911; stress and crisis management.

**Introduction to Homeland Security** – This course focuses on security policy, planning and operations dedicated to the protection of U.S. territory, assets, infrastructure, institutions and citizens from external threats. Includes instructions in national security policy, government relations, intelligence, law enforcement, security technology, communications and information technology, homeland security planning operations, disaster planning and applications to specific threat scenarios.

**Health and Well-Being for Law Enforcement** – This course is designed to give the student an overview of personal fitness and wellness including how to maintain good physical fitness and proper nutrition. The course will also give the student an overview of the warning signs of and how to deal with stress in the law enforcement profession.

Scholars may participate in leadership opportunities through:

- Skills USA

# PRE-ENGINEERING ACADEMY

## PRE-ENGINEERING CAREER PATHWAY PROJECT LEAD THE WAY (PLTW)

PATHWAY DESCRIPTION	EXAMPLE CAREERS
<p>A program that generally prepares individuals to apply mathematical and scientific principles to solve a wide variety of practical problems in industry, social organization, public works, and commerce. Includes instruction in undifferentiated and individualized programs in engineering.</p>	<ul style="list-style-type: none"> <li>• Engineering Technology Instructor</li> <li>• Production Woodworker</li> <li>• Manufacturing Manager</li> <li>• Manufacturing Worker</li> <li>• Electronics Assembler</li> <li>• Industrial Engineer</li> <li>• Industrial Technician</li> <li>• Quality Controller</li> <li>• Architect</li> <li>• Aerospace Engineer</li> <li>• Interior Designer</li> <li>• Nuclear Engineer</li> <li>• Electrical Engineer</li> <li>• Electronics Engineer</li> <li>• Civil Engineer</li> <li>• Computer Hardware Engineer</li> </ul> <p><b>PROGRAM COMPLETION ASSESSMENT</b></p> <ul style="list-style-type: none"> <li>• KOSSA – Engineering and Technology</li> </ul>

**Scholars enrolled in courses below will be enrolled in the Pre-Engineering Academy and will take their English and mathematics courses at Gateway Academy. The English and mathematics courses are listed under “Core Content Courses” in this section.**

Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
219901	Introduction to Engineering Design (PLTW)	9	1 credit/1 year	CAD 100	None
219904	Computer Integrated Manufacturing (PLTW)	10	1 credit/1 year		Introduction to Engineering Design (PLTW)
219902	Principles of Engineering (PLTW)	11	1 credit/1 year		Computer Integrated Manufacturing (PLTW)
219917	Special Topics in Engineering	12	1 credit/1 year		Principles of Engineering (PLTW)
210330 OR 210331	Engineering & Technology Co-Op OR Engineering & Technology Internship	12	2 credits/1 year		Successful completion of 3 courses, teacher recommendation, and district application.



**Introduction to Engineering/Design** - This course provides instruction and experiences that develop foundational skills in engineering processes. Scholars gain skills in problem-solving by using a design development process. Models of product solutions are created, analyzed, and communicated using solid modeling computer design software.

**Computer Integrated Manufacturing** - This course builds on computer solid modeling skills developed in the Introduction to Engineering Design Course. Scholars use CAD software to design and develop a product and use CNC equipment to produce a mock-up or prototype. Fundamental concepts of computer integrated manufacturing (CIM) such as concurrent engineering, robotics, and cellular manufacturing are applied during the product development process.

**Principles of Engineering** - This is a fundamental course that provides a project based learning approach to understanding the principles and concepts of physics and associated mathematics for most Engineering Technology programs. Scholars explore various careers and disciplines of engineering areas, problem solving and core technology such as, but not limited to; manufacturing, power/energy/transportation, robotics, hydraulics, electricity/electronics, communications, construction systems, alternative energy and computer aided design.

**Special Topics in Engineering** – Special Topics in Engineering allows the teacher to develop a course for in-depth exploration of specific engineering topics. This is a laboratory-based course designed to study an engineering challenge, and/or recent technological advancements such as alternative energy, transportation, or other energy-related fields.

**Engineering & Technology Co-Op** – Cooperative education is an educational program consisting of in-school instruction combined with the program related on-the-job work experience in a business or industrial establishment. These are planned experiences supervised by the school and the employer to ensure that each phase contributes to the students Individual Learning Plan (ILP).

**Engineering & Technology Internship** – Internship for CTE courses provided supervised work-site experience for high school students associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short term basis (semester or less).

### Core Content Courses

Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
<b>English Courses</b>					
230107	Pre-AP English I	9	1 credit/1 year		None
230110	Pre-AP English II	10	1 credit/1 year		Pre-AP English I
230166	AP English Language & Composition	11	1 credit/1 year		Pre-AP English II
230116	Pre-AP English IV	12	1 credit/1 year		AP English III
230169	English 101(KCTCS)	12	1 credit/1 Semester	ENG 101	AP English III and ACT Score of 18 in English
230169	English 102(KCTCS)	12	1 credit/1 Semester	ENG 102	English 102(KCTCS)

Mathematics Courses					
270304	Pre-AP Algebra I	9	1 credit/1 year		None
270401	Pre-AP Geometry	9-10	1 credit/1 year		Pre-AP Algebra I
270311	Pre-AP Algebra II	10-11	1 credit/1 year		Pre-AP Geometry
270501	Pre-Calculus	11	1 credit/1 year		Pre-AP Algebra II
270513	AP Calculus	12	1 credit/1 year		Pre-Calculus
270320	College Algebra	12	1 credit/1 Semester	MA 109	Algebra II and ACT Score of 22 in Math

Scholars may participate in leadership opportunities through:

- Skills USA
- VEX Robotics



# TRANSPORTATION EDUCATION

## AUTOMOTIVE MAINTENANCE & LIGHT REPAIR TECHNICIAN CAREER PATHWAY

PATHWAYDESCRIPTION	EXAMPLE CAREERS	LAB AREA DRESS CODE
This program prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. Includes instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems.	<ul style="list-style-type: none"> <li>• Entry Level Auto Technician</li> <li>• Service Advisor</li> <li>• Dispatcher</li> <li>• Warranty Clerk</li> <li>• Auto Sales Rep</li> <li>• Service Manager</li> </ul> <p>PROGRAM COMPLETIONASSESSMENT</p> <ul style="list-style-type: none"> <li>• KOSSA – Automotive Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Closed Toed Shoes</li> <li>• Safety Glasses</li> <li>• No Jewelry</li> <li>• Coveralls</li> </ul>

### Courses Available:

Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
470507	Automotive Maintenance and Light Repair A & Lab	9-12	1 Credit/1 Semester	ADX 120-121	None
470509	Automotive Maintenance and Light Repair B & Lab	9-12	1 Credit/1 Semester	ADX 120-121	Automotive Maintenance and Light Repair A
470511	Automotive Maintenance and Light Repair C & Lab	10-12	1 Credit/1 Semester	ADX 120-121	Automotive Maintenance and Light Repair B
470513	Automotive Maintenance and Light Repair D & Lab	10-12	1 Credit/1 Semester	ADX 120-121	Automotive Maintenance and Light Repair C
470501	Co-op (Automotive Maintenance)	12	All Year	AUT 199	Successful completion of 3 courses, teacher recommendation, and district application

**Automotive Maintenance and Light Repair and Lab Sections A, B, C, D** – These courses introduce the scholar to the principles, theories, and concepts of Automotive Technology and include instruction in the maintenance and light repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task, including proper care and cleaning of customers' vehicles. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The scholar will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources, and demonstrate the ability to write workorders.

Scholars may participate in leadership opportunities through:

- Skills USA
- Work-based Learning

# TRANSPORTATION EDUCATION

## AUTOMOTIVE SERVICE TECHNICIAN CAREER PATHWAY

<p><b>PATHWAYDESCRIPTION</b> This program prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. Includes instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems.</p>	<p><b>EXAMPLE CAREERS</b></p> <ul style="list-style-type: none"> <li>• Entry Level Auto Technician</li> <li>• Service Advisor</li> <li>• Dispatcher</li> <li>• Warranty Clerk</li> <li>• Auto Sales Rep</li> <li>• Service Manager</li> <li>• Shop Foreman</li> </ul> <p><b>PROGRAM COMPLETIONASSESSMENT</b></p> <ul style="list-style-type: none"> <li>• KOSSA – Automotive Technology</li> </ul>	<p><b>LAB AREA DRESS CODE</b></p> <ul style="list-style-type: none"> <li>• Closed Toed Shoes</li> <li>• Safety Glasses</li> <li>• No Jewelry</li> <li>• Coveralls</li> </ul>
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### Courses Available:

Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
470515	Automobile Service Technology Section A&Lab	11-12	1 Credit/1 Semester	ADX 120-121	Automotive Maintenance & Light Repair A, B, C, &D
470517	Automobile Service and Technology Section B&Lab	11-12	1 Credit/1 Semester	ADX 120-121	Automobile Service & Technology Section A
470519	Automobile Service and Technology Section C&Lab	12	1 Credit/1 Semester	ADX 120-121	Automobile Service & Technology Section B
470521	Automobile Service and Technology Section D&Lab	12	1 Credit/1 Semester	ADX 120-121	Automobile Service & Technology Section C
470501	Co-op (Automotive Maintenance)	12	All Year	AUT 199	Successful completion of 3 courses, teacher recommendation, and district application

**Automobile Service Technology and Lab Sections A, B, C, D** – These courses present the theory, component identification, operation, diagnosis, and the service and repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The scholar will also locate and use current reference and training materials from accepted industry publications and resources, and write industry standard work orders.

Scholars may participate in leadership opportunities through:

- Skills USA
- Work-based Learning

# WELDING TECHNOLOGY

## WELDER-ENTRY LEVEL CAREER PATHWAY

<p style="text-align: center;"><b>PATHWAYDESCRIPTION</b></p> <p>An Entry Level Welder demonstrates the ability to assist lead welders in the fabrication of steel and metal structures. Must be adept at performing basic welding functions and calculating dimensions as well as operating power equipment, grinders and other related tools. Must be proficient in reading and interpreting basic blueprints and following work procedure specifications (WPS).</p>	<p style="text-align: center;"><b>EXAMPLE CAREERS</b></p> <ul style="list-style-type: none"> <li>• Combination Welder</li> <li>• Pipe Welder</li> <li>• Ironworker</li> <li>• Tungsten Inert Gas (TIG) Welder</li> <li>• Certified Welding Inspector(CWI)</li> <li>• Certified Welding Educator(CWE)</li> <li>• Welding Engineer</li> <li>• Structural Engineer</li> <li>• Mechanical Engineer</li> </ul> <p style="text-align: center;"><b>PROGRAM COMPLETIONASSESSMENTS</b></p> <ul style="list-style-type: none"> <li>• KOSSA – Welding</li> <li>• Industry Certifications – AWS-Sense Certification Level 1; 2-F(AWS) Qualification; Kentucky Department of Transportation 3-G</li> </ul>	<p style="text-align: center;"><b>LAB AREA DRESS CODE</b></p> <ul style="list-style-type: none"> <li>• Closed Toed Shoes</li> <li>• Safety Glasses</li> <li>• Long Pants</li> <li>• Gloves</li> <li>• Coveralls</li> </ul>
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Course Number	Course Name	Grade	Credit/Length of Course	Post-Secondary Connection	Prerequisite
499920	Basic Blueprint Reading	9-10	5 credit/ 1 Nine Weeks	BRX 120	
480503	Basic Welding A	9-10	5 credit/ 1 Nine Weeks	WLD 151	Basic Blueprint Reading
480523	Oxy-fuel Systems	9-10	1 credit/1 semester	WLD 100	Basic Blueprint Reading & Basic Welding A
480522	Gas Metal Arc Welding(GMAW)	10-11	1 credit/ 1semester	WLD 140	Oxy-fuel Systems
480533	GMAW Open GrooveLab	10-11	1 credit/ 1semester	WLD 143	Gas Metal Arc Welding(GMAW)
480521	Shielded Metal Arc Welding (SMAW)	11-12	1 credit/1 semester	WLD 120	GMAW Open GrooveLab
480533	SMAW Open GrooveLab	11-12	1 credit/1 semester	WLD 225	Shielded Metal Arc Welding (SMAW)
480505	Blueprint Reading for Welding	12	1 credit/1 semester	WLD 170	SMAW Open Groove Lab
480507	Welding Certification	12	1 credit/1 semester	WLD 220	Blueprint Reading for Welding
480541	Cooperative Education (Welding)	12	1 or 2 credits	WLD 299	Successful completion of 3 courses, teacher recommendation, district application

**Basic Blueprint Reading** – This course presents basic applied math, lines, multi-view drawings, symbols, various schematics and diagrams, dimensioning techniques, sectional views, auxiliary views, threads and fasteners, and sketching typical to all shop drawings. Safety will be emphasized as an integral part of the course.

**Basic Welding A** – Students are introduced to welding, cutting processes, and related equipment. Basic setup, operation, and related safety are applied.

**Oxy-fuel Systems** – This course provides a working knowledge of: oxy-fuel identification, set-up, inspection, and maintenance; consumable identification, selection and care; principles of operation; and effects of variables for manual and mechanized oxy-fuel cutting, welding, brazing principles and practice, and metallurgy. Shop safety and equipment use are also covered.

**Gas Metal Arc Welding (GMAW)** – This course covers identification, inspection, and maintenance of GMAW machines; identification, selection and storage of GMAW electrodes; principles of GMAW; and the effects of variables on the GMAW process. Theory and applications of related processes such as FCAW and SAW and metallurgy are also included. Scholars learn the practical application and manipulative skills of Gas Metal Arc Welding and the proper safety situations needed in this process. Both ferrous and non-ferrous metals will be covered, as well as various joint designs on plate in all positions.

**GMAW Groove Lab** – Scholars learn the method of operation and application of the Gas Metal Arc Welding process for welding groove welds in both ferrous and non-ferrous plate in all positions using both short circuiting and spray transfer where appropriate.

**Shielded Metal Arc Welding (SMAW)** – Scholars learn the identification, inspection, and maintenance of SMAW electrodes; principles of SMAW; the effects of variables on the SMAW process to weld plate and pipe; and metallurgy.

**SMAW Open Groove Lab** – This course offers the scholar the opportunity to advance skills in the practical aspects of vee-butt plate welding using SMAW.

**Blueprint Reading for Welding** – This course provides a study of occupationally specific prints for welders. Advanced study of multi-view drawings, assembly drawings, datum dimensions, numerical control drawings, sheet metal prints, castings and forgings, instrumentation and control charts and diagrams, working drawings, geometric dimensioning and tolerance and use of reference materials and books are included. Occupational specifics including welding drawings, symbols, joint types, grooves, pipe welding symbols, testing symbols, and specification interpretations are stressed.

**Welding Certification** – Students will gain a working knowledge of certification encountered in welding. The student will start with developing a WPS, qualify the WPS, and qualify personnel. Documents used in welding certification are developed and used.

**Cooperative Education (Welding)** – Cooperative Education provides supervised on-the-job work experience related to the scholars' educational objectives. Scholars participating in the Cooperative Education program receive compensation for their work.

Scholars may participate in leadership opportunities through:

- Skills USA
- Work-based Learning
- Welding Competitions for Scholarships

# GATEWAY ACADEMY TO INNOVATION & TECHNOLOGY

## SCHOLAR APPLICATION 2017-2018

Provide accurate data to be eligible for placement in a Career and Technical Program at Gateway Academy. Once applications have been collected, you may be called in for an interview.

SCHOLAR DATA	
Full Legal Name	
Current Address	
Home School	Circle One:    21 <sup>st</sup> Century    CCHS    HHS    CCMS    HMS
Grade for 2017-18	Circle One:        9 <sup>th</sup> 10 <sup>th</sup> 11 <sup>th</sup> 12 <sup>th</sup>
Contact Information	Home Phone:                                  Cell:                                  Email:

CHOOSE A PROGRAM	
<b>Choose three programs of interest based on your career interests in your ILP. Indicate your first choice with a #1, second choice with a #2, and third choice with a #3. If your first choice is full, we will do our best to place you in one of your other choices.</b>	
	Academy of Hospitality and Tourism – Culinary and Food Services Career Pathway
	Academy of Hospitality and Tourism – Hospitality, Travel, Tourism & Recreation Career Pathway
	Electrical Technology – Construction Electrical TRACK Pathway
	Health Science Academy – Pre-Nursing Career Pathway
	Health Sciences – Biomedical Sciences Career Pathway (PLTW)
	Industrial Maintenance Technology – IMT TRACK Career Pathway
	Information Technology – Digital Design & Game Development Career Pathway
	Information Technology – Information Support & Services Career Pathway
	Law and Public Safety – Law Enforcement Services Career Pathway
	Pre-Engineering Academy – Pre-Engineering Career Pathway (PLTW)
	Transportation Education – Automotive Maintenance & Light Repair Technician Career Pathway
	Transportation Education – Automotive Service Technician Career Pathway
	Welding Technology – Welder – Entry Level Career Pathway

For Office Use Only  
 Accepted: Yes \_                    No \_                    Program \_

In the space provided, explain why you would be a good candidate for your first choice.  
Attach additional page if needed.

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SCHOLAR CODE OF ACCEPTABLE BEHAVIOR

SIGNATURE PAGE

Gateway Academy’s Code of Acceptable Behavior is in addition to Christian County Public Schools’ Code of Acceptable Discipline and Behavior.

I have read Gateway Academy’s Code of Acceptable Behavior.

I agree to abide by all rules and safety guidelines while attending Gateway Academy.

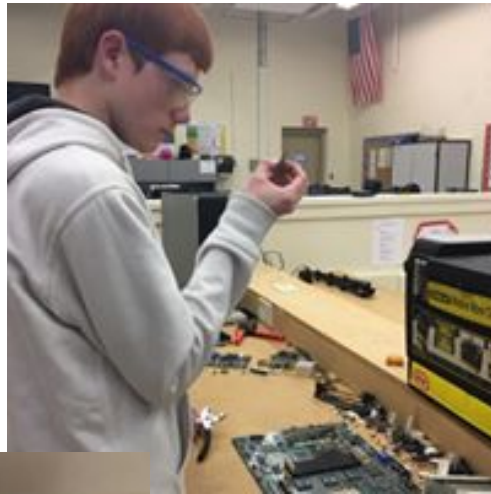
\_\_\_\_\_  
Scholar Signature

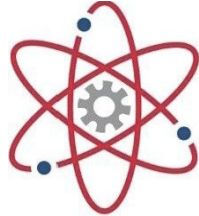
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Date

\_\_\_\_\_  
Parent Signature

\_\_\_\_\_  
Date







PROJECT LEADTHEWAY

**PLTW**  
**A**cademy  
*of* ENGINEERING



**National Institute for Metalworking Skills**

**A**cademy  
*of* HEALTH SCIENCES



NATIONAL CENTER FOR  
CONSTRUCTION EDUCATION  
AND RESEARCH

**HOSA**



**SkillsUSA**  
**Champions at Work®**

