

# Early College and Career Academy 2022-2023 Program Guide



 **EDUCATION for EMPLOYMENT SYSTEM #330**

# Automotive Technology - Year One



**Course Description:** This program introduces students to the skills needed to inspect, maintain, and repair automobiles and light trucks with internal combustion engines. Instructional units include: Automotive industry overview, careers, advanced training options, and workplace ethics; Vehicle safety, operation, inspection and maintenance; Hybrid vehicle operation and safety; Vehicle steering and suspension system operation, component inspection and repair, braking system operation, inspection and repair. Second year students will have the opportunity to earn ASE student certifications. Students who successfully complete both years of the ECCA automotive program will have completed the coursework necessary for the Parkland College Maintenance and Light Repair Certificate. Students will have the option to try out for the Hot Rodders of Tomorrow engine building team.

## Parkland College Dual Credit Available

<u>Course Number</u>	<u>Course Name</u>	<u>Credit Hours</u>
AFD 110	Automotive Maintenance and Light Repair	4 Credit Hours
AFD 210	Automotive Work Experience Seminar	3 Credit Hours
AFD 113	Automotive Chassis Systems Maintenance and Light Repair	7 Credit Hours
		<hr/> 14 Total Credit Hours

## Careers Available in this Industry

Automotive Service Technician  
Service Manager  
Parts Manager  
Automotive Instructor  
Product Engineer

## Course Requirements/Prerequisites

- 2.0/4.0 GPA preferred, but exceptions can be made with administrative approval
- Check with your counselor for any school-specific program prerequisites
- Open to both Juniors and Seniors

# Automotive Technology – Year Two



**Course Description:** This program introduces students to the skills needed to inspect, maintain, and repair automobiles and light trucks with internal combustion engines. Instructional units include: Engine operation, testing and performance. Automotive electrical/electronic system operation, inspection, testing and repair. Cooling system inspection, testing and maintenance; Drive axle inspection and service. Second year students will have the opportunity to earn ASE student certifications. Students who successfully complete both years of the ECCA automotive program will have completed the coursework necessary for the Parkland College Maintenance and Light Repair Certificate.

## Parkland College Dual Credit Available

<u>Course Number</u>	<u>Course Name</u>	<u>Credit Hours</u>
AFD 111	Automotive Powertrain Maintenance and Light Repair	7 Credit Hours
AFD 115	Basic Chassis Electrical Systems	7 Credit Hours
		<u>14 Total Credit Hours</u>

## Careers Available in this Industry

Automotive Service Technician  
Service Manager  
Parts Manager  
Automotive Instructor  
Product Engineer

## Course Requirements/Prerequisites

- Successful completion of Automotive Technology Year One ECCA Program
- 2.0/4.0 GPA preferred, but exceptions can be made with administrative approval
- Check with your counselor for any school-specific program prerequisites

# Computer Programming



**Course Description:** This program will provide an introduction to logic and fundamental programming concepts using a common computer language with emphasis on syntax and structure. Topics covered will include programming skills for creating websites, covering a range of topics from HTML and CSS to basic usage of common design patterns and web frameworks. An introduction to computer science and programming using the Java language will be provided with an emphasis on problem solving, algorithm design, and program development including data representation, programming constructs, and object-oriented design fundamentals. Spring semester will include an introduction to developing software systems integrated with databases, file systems, and networks and to web application frameworks.

## Parkland College Dual Credit Available

Course Number	Course Name	Credit Hours
CIS 122	Introduction to Computer Programming	4 Credit Hours
CIS 152	Web Design and Development 1	3 Credit Hours
CSC 155	Systems Development 1	3 Credit Hours
CSC 140	Computer Science 1 (Java)	3 Credit Hours
		13 Total Credit Hours

## Careers Available in this Industry

Computer Programmer  
Web Developer  
Software Developer  
Mobile App Developer  
Business Intelligence Analyst

## Course Requirements/Prerequisites

- 2.5/4.0 GPA preferred, but exceptions can be made with administrative approval
- Seniors only with limited exceptions

# Construction Trades



**Course Description:** ECCA Construction Trades is for students interested in careers related to the building and construction trades and is a partnership with the East Central Illinois Building and Construction Trades Council. The program will include a combination of on-campus instruction through Parkland coursework and hands-on lab activities and off-campus instruction at local building trades facilities. Students will learn at off-campus locations two days per week from professionals in areas such as plumbing, electrical, carpentry, painting, roofing, ironworking, bricklaying, and more. On-campus instruction during the first semester will include an introduction to the construction industry including residential, commercial, and industrial sectors; a survey of career paths within construction; jobsite safety; and professional tool usage. Second semester on-campus instruction will provide an overview of basic residential building planning, components, materials, and construction methods. Drawings, specifications and building codes will be covered, as well as an overview of plumbing, electrical, heating, and air conditioning systems. Students will have an opportunity to form connections with local professionals within the construction industry and earn their OSHA 30-hour safety certification. Additionally, students will learn how to apply for apprenticeships with local building trade unions.

## **Parkland College Dual Credit Available**

<b>Course Number</b>	<b>Course Name</b>	<b>Credit Hours</b>
CIT 118	Introduction to Construction	3 Credit Hours
CIT 135	Residential Building Systems	3 Credit Hours
CIT 110	Introduction to Building Trades	4 Credit Hours
		<hr/> 10 Total Credit Hours

## **Careers Available in this Industry**

All Construction Trades (plumber, carpenter, electrician, roofer, painter, equipment operator, etc.)

Construction Manager

Civil Engineer

Architect

## **Course Requirements/Prerequisites**

- 2.0/4.0 GPA preferred, but exceptions can be made with administrative approval
- This is a one-year program

# Criminal Justice



**Course Description:** This program provides a history of the development, philosophy, and constitutional aspects of criminal justice procedures and agencies. Included will be an overview of the juvenile delinquency system and the United States correctional system. Other topics will be criteria for criminal acts, requisite mental state, criminal parties, causation and defenses, common law crimes, and application of the Illinois Criminal Code. Hands-on instruction will include techniques to process crime scenes and analyze physical evidence to help solve cases.

## Parkland College Dual Credit Available

<u>Course Number</u>	<u>Course Name</u>	<u>Credit Hours</u>
CJS 127	Juvenile Delinquency	3 Credit Hours
CJS 101	Introduction to Criminal Justice	3 Credit Hours
CJS 203	Criminal Law	3 Credit Hours
CJS 104	Introduction to Corrections	3 Credit Hours
		<u>12 Total Credit Hours</u>

## Examples of Careers in Criminal Justice

Police Officer  
Lawyer  
Crime Scene Investigator  
Probation/Parole Officer  
Department of Natural Resources Officer  
Paralegal

## Course Requirements/Prerequisites

- Seniors only with limited exceptions
- 2.5/4.0 GPA preferred, but exceptions can be made with administrative approval
- Must finish first semester with C average or better to continue into second semester

# Certified Nursing Assistant – Health Professions

## Fall or Spring Semester

**Orientation to Health Careers Course Description:** The main purpose of this course is to assist students in further development of their self-concept and in matching personal abilities and interest to a tentative career choice within the healthcare field. Course content will provide in-depth information regarding health occupations careers and trends, the occupational and educational opportunities and the educational, physical, emotional and attitudinal requirements of careers in the medical field.

**Medical Terminology Course Description:** The primary focus will be on developing both oral and written skills in the language used to communicate within health care professions.

**Legal Issues in Healthcare Course Description:** This course focuses on law as it pertains to health professionals; consent for medical services, invasion of privacy, malpractice, governmental regulations, actions for collecting patient bills, bioethical, and end of life issues.

## Fall or Spring Semester

**Certified Nursing Assistant Course Description:** The Basic Nursing Assistant Training Program prepares students to care for patients under the direct supervision of a licensed nurse in a long-term care facility, a hospital, assisted living facility, or in the home. The course is approved by the Illinois Department of Public Health. After successful completion of the program, students are eligible to sit for the Illinois Nurse Assistants Certification exam.

## Parkland College Dual Credit Available

<u>Course Number</u>	<u>Course Name</u>	<u>Credit Hours</u>
HCS 112	Orientation to Health Careers	2 Credit Hours
HCS 154	Medical Terminology	3 Credit Hours
HCS 174	Legal Issues in Healthcare	1 Credit Hour
NAS 111	Basic Nursing Assistant Training Program	6 Credit Hours
		<u>12 Total Credit Hours</u>

## Examples of Careers in Healthcare

Doctors  
Nurses  
Physical Therapists  
Athletic Trainers  
X-Ray Technicians  
Surgical Technologists

## Course Requirements/Prerequisites

- 2.5/4.0 GPA preferred, but exceptions can be made with administrative approval
- Assessment: Placement into CCS 099, ENG 099, MAT 072
- Open to Juniors and Seniors
- Students will be able to sit for the state CNA licensing exam

# ECCA Education Pathway



**Program Description:** This program is for future teachers and those who are considering a career in education. The Education Pathway program will include a classroom component and an off-campus component, which will be developed in consultation with local school districts. The classroom portion will focus on the philosophy and history of American public education, careers within education, and the role of the teacher, including discussion on current issues in education. Additionally, the instruction will include the development of teaching methods and lesson plans incorporating differentiated instruction. Students will develop an understanding of characteristics of exceptional learners and their education including history, definitions, service delivery, legislation, and principles, strategies and methods of effective instruction for exceptional learners. Educational Technology will prepare students to incorporate technology into lesson plans to meet the needs of all learners.

**Practical Experience:** The Education program includes a practical experience, which will take place on each Friday throughout the school year. The practical experience will be jointly developed by ECCA and the student's home high school and will include observation hours and classroom assisting at local school districts.

## Parkland College Dual Credit Available

<u>Course Number</u>	<u>Course Name</u>	<u>Credit Hours</u>
EDU 101	Introduction to Education	3 Credit Hours
FYE 101	Strategies for College Success	3 Credit Hours
EDU 104	Introduction to Special Education	3 Credit Hours
EDU 103	Introduction to Educational Technology	3 Credit Hours
		12 Total Credit Hours

## Program Requirements/Prerequisites

- 2.5/4.0 GPA preferred, but exceptions can be made with administrative approval
- ENG 101 Placement
- Check with your counselor for any school-specific program prerequisites



# Emergency Medical Services - Health Professions Focus



## 1<sup>st</sup> Semester

**Orientation to Health Careers Course Description:** The main purpose of this course is to assist students in further development of their self-concept and in matching personal abilities and interest to a tentative career choice within the healthcare field. Course content will provide in-depth information regarding health occupations careers and trends, the occupational and educational opportunities and the educational, physical, emotional and attitudinal requirements of careers in the medical field.

**Medical Terminology Course Description:** The primary focus will be on developing both oral and written skills in the language used to communicate within health care professions.

**Legal Issues in Healthcare Course Description:** This course focuses on law as it pertains to health professionals; consent for medical services, invasion of privacy, malpractice, governmental regulations, actions for collecting patient bills, bioethical, and end of life issues.

## 2<sup>nd</sup> Semester

**Emergency Medical Technician Course Description:** The Emergency Medical Services-Basic course prepares the student to provide pre-hospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of EMT-Basics, anatomy and physiology, medical emergencies, trauma, special considerations for working in the pre-hospital setting, and providing patient transport. This course prepares the student to take the State of Illinois EMT-Basic license examination.

## Parkland College Dual Credit Available

Course Number	Course Name	Credit Hours
HCS 112	Orientation to Health Careers	2 Credit Hours
HCS 154	Medical Terminology	3 Credit Hours
HCS 174	Legal Issues in Healthcare	1 Credit Hour
EMS 110	Emergency Medical Services 1: EMT-B	5 Credit Hours
		<u>11 Total Credit Hours</u>

## Course Requirements/Prerequisites

- Seniors Only, no exceptions
- 2.5/4.0 GPA preferred, but exceptions can be made with administrative approval
- Assessment: Placement into CCS 099, ENG 099, MAT 072
- Students will be able to sit for the EMT (B) state licensing exam upon graduation from high school and after reaching 18 years of age.

# Emergency Medical Services - Fire Service Focus



## 1<sup>st</sup> Semester

**Orientation to Health Careers Course Description:** The main purpose of this course is to assist students in further development of their self-concept and in matching personal abilities and interests to a tentative career choice within the healthcare field. Course content will provide in-depth information regarding health occupations careers and trends, the occupational and educational opportunities and the educational, physical, emotional and attitudinal requirements of careers in the medical field.

**Legal Issues in Healthcare Course Description:** This course focuses on law as it pertains to health professionals; consent for medical services, invasion of privacy, malpractice, governmental regulations, actions for collecting patient bills, bioethical, and end of life issues.

**Introduction to the Fire Service Course Description:** Provides an overview to fire service; career opportunities in fire protection and related fields; philosophy and history of the fire service; fire loss analysis; organization and function of public fire protection services; fire departments as part of local government; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics. Will include hands-on activities and demonstrations.

## 2<sup>nd</sup> Semester

**Emergency Medical Technician Course Description:** The Emergency Medical Services-Basic course prepares the student to provide pre-hospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of EMT-Basics, anatomy and physiology, medical emergencies, trauma, special considerations for working in the pre-hospital setting, and providing patient transport. This course prepares the student to take the State of Illinois EMT-Basic license examination.

## Parkland College Dual Credit Available

<u>Course Number</u>	<u>Course Name</u>	<u>Credit Hours</u>
HCS 112	Orientation to Health Careers	2 Credit Hours
FST 111	Introduction to the Fire Service	3 Credit Hours
HCS 174	Legal Issues in Healthcare	1 Credit Hour
EMS 110	Emergency Medical Services 1: EMT-B	5 Credit Hours
		11 Total Credit Hours

## Course Requirements/Prerequisites

- Seniors Only, no exceptions
- 2.5/4.0 GPA preferred, but exceptions can be made with administrative approval
- Assessment: Placement into CCS 099, ENG 099, MAT 072
- Students will be able to sit for the EMT (B) state licensing exam upon graduation from high school and after reaching 18 years of age.

# Industrial Technology: Machining, Welding, and Design



**Course Description:** This program will include interpreting documentation for assembly and installation requirements; fundamentals of power transmission; basic and precision measuring tools; fasteners, tools, and torque specifications; bearing types and applications; seals; gaskets, and lubrication. Welding topics will include selection and use of electric arc, oxyacetylene, inert gas, and wire-feed welders, with an emphasis on skills and competencies as demanded by industry. The program will also include an introduction to applications of fluid and pneumatic power transfer and control. Content will include the design process with practical and computer-aided evaluation of power transmission devices, including gears, shafts, belts, chains, and other components using SolidWorks software. Both first-year and second-year Manufacturing students will be enrolled in the courses listed below.

## Parkland College Dual Credit Available

<u>Course Number</u>	<u>Course Name</u>	<u>Credit Hours</u>
WLD 111	Introduction to Welding	4 Credit Hours
MFT 113	Introduction to Hydraulics and Pneumatics	3 Credit Hours
MFT 110	Mechanical Assemblies	3 Credit Hours
CAD 113	Computer Aided Machine Design I	4 Credit Hours
		14 Total Credit Hours

## Examples of Careers in Manufacturing and Industrial Technology

Machinists, including CNC machine operators and programmers

Welders

Electrical/Industrial/Mechanical Engineers

Industrial Maintenance Workers

Logistics Managers

Quality-Control Specialists

## Course Requirements/Prerequisites

- 2.0/4.0 GPA preferred, but exceptions can be made with administrative approval
- Check with your counselor for any school-specific course prerequisites
- Scholarship and internship opportunities are available

# Precision Agriculture



**Course Description:** The ECCA Precision Agriculture program is for students interested in the application of UAV (drone) technology. Students will complete coursework to prepare for the FAA Commercial Drone Pilot exam, while learning about the implementation of GPS, GIS and other technologies within the precision agriculture industry. Students will learn basic drone flight maneuvers and use simulator software. Mission planning, data collection, and safety procedures are covered. Students do not need to be involved in or have completed coursework in Agriculture to be enrolled. All students are welcome, especially those with an interest in technology and its implementation.

## Parkland College Dual Credit Available

<b>Course Number</b>	<b>Course Name</b>	<b>Credit Hours</b>
AVI 111	Commercial Drone Ground School	3 Credit Hours
AVI 112	Introduction to Drone Flight	3 Credit Hours
AGB 214	Precision Farming Technology	3 Credit Hours
AGB 215	Applications of GIS in Agriculture	3 Credit Hours
		12 Total Credit Hours

## Examples of Careers in Precision Agriculture

Crop Specialist  
Precision Farming Specialist  
Precision Agriculture Technician

## FAA-licensed drone pilots are employed in almost every industry including:

Real estate, Insurance, Agriculture, Construction, and many others

## Course Requirements/Prerequisites

- 2.0/4.0 GPA preferred, but exceptions can be made with administrative approval
- Seniors only with limited exceptions
- Students will complete coursework to prepare for the FAA Commercial Drone Pilot exam
- Summer internship opportunities available for motivated students