Early College and Career Academy

2019 - 2020

Program Guide

PARKLAND COLLEGE

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

Course Number	Course Name	Credit Hours
AFD 110	Automotive Maintenance and Light Repair	4 Credit Hours
AFD 210	Automotive Work Experience Seminar	2 Credit Hours
AFD 113	Automotive Chassis Systems Maintenance and Light Repair	7 Credit Hours
		13 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
- 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

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

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
- Check with your counselor for any school-specific program prerequisites

Collision Repair

BEFORE...   ...AFTER

Program Description: This program will provide an overview of the collision repair industry with an emphasis on the repair process. Major topics of instruction will include: cost estimating and measurement systems, straightening unibody systems, restoring corrosion protection, outer panel protection, dent repair, door skins, quarter panels, and removing and installing fenders, doors, and decklids. A heavy emphasis will be placed on safety principles and practices within a collision repair shop setting. At least 50% of the program will be spent in a lab setting, reinforcing classroom material. Students will have the opportunity to earn industry-recognized certifications. Collision Repair is available to both high school juniors and seniors. 2019-2020 will be a pilot year for this program. Additional courses are planned for the 2020-2021 school year, meaning a student can enroll in the program as a junior in the fall of 2019 and complete two years.

Parkland College Dual Credit Available

Course Number	Course Name	Credit Hours
ACR 130	Unibody Construction, Estimating, and Measurement	4 Credit Hours
ACR 133	Unibody Collision Repair	4 Credit Hours
ACR 131	Collision Repair Work (Lab) Experience	2 Credit Hours
		10 Total Credit Hours

Careers Available in this Industry

General Collision Repair Technician

Estimator

Refinish Technician

Production Management

Electrical/Mechanical Technician

Course Requirements/Prerequisites

- 2.0/4.0 GPA (Exceptions can be made with approval of school and ECCA administration)
- Check with your counselor for any school-specific program prerequisites

Computer Networking

Course Description: This program will provide an introduction to local area networks, wide area networks, and the Internet; including hardware, software, terminology, components, design, connections of a network, and topologies and protocols for local area networks. It will provide a comprehensive study of Linux user commands and utilities. Hands-on instruction will be related to GNU utilities and commands, secure intersystem communications, text processing, vi editor, bash shell, and shell scripting. Students will learn to manage Windows workstations including networking, operating system, installation, file system, profiles and policies, security, protocols, internetworking, remote access, printing, and troubleshooting. Program will cover listed objectives for CompTIA A+, CompTIA Network+, and the Microsoft Windows Workstation certification exams.

Parkland College Dual Credit Available

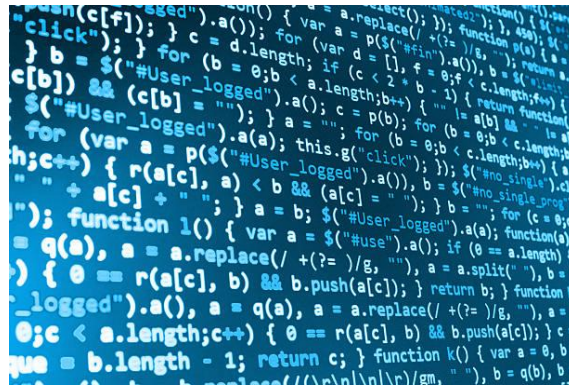| Course Number	Course Name	Credit Hours
CSC 133	PC Hardware and OS Maintenance	4 Credit Hours
CSC 151	MS OS Workstation	3 Credit Hours
CSC 128	Introduction to Linux	3 Credit Hours
CSC 130	Introduction to Computer Networks	3 Credit Hours
		13 Total Credit Hours

Careers Available in this Industry

Network Administrator

Network Systems Engineer

IT Manager

Computer Programmer

Network Service Technician

Course Requirements/Prerequisites

- 2.5/4.0 GPA preferred, but exceptions can be made with administrative approval
- Check with your counselor for any school-specific program prerequisites
- Open to juniors and seniors, but juniors will receive first available spots
- **Students who successfully complete Computer Networking as a junior will secure a guaranteed spot in Computer Programming as a senior**

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 and C/C++ languages will be provided with an emphasis on problem solving, algorithm design, and program development including data representation, programming constructs, and object-oriented design fundamentals.

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 123	Computer Science 1 (C/C+)	4 Credit Hours
CSC 140	Computer Science 1 (Java)	3 Credit Hours
		14 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
- **Students who successfully complete Computer Networking as a junior will secure a guaranteed spot in Computer Programming as a senior. Any remaining spots will be available to seniors.**
- Students who successfully complete the Computer Networking and Computer Programming sequence will earn the Parkland College Computer Foundations certificate

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

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

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 unless you have approval of ECCA Director and Guidance Counselor
- 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

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
NAS 111	Basic Nursing Assistant Training Program	6 Credit Hours
		12 Total Credit Hours

Examples of Careers in Healthcare

Doctors

Nurses

Physical Therapists

Athletic Trainers

X-Ray Technicians

Surgical Technologists

Course Requirements/Prerequisites

- 2.5/4.0 GPA
- 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

Emergency Medical Services - Health Professions Focus

1st 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.

2nd 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
		11 Total Credit Hours

Course Requirements/Prerequisites

- Seniors Only
- 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 Science Focus

1st 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.

2nd 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
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
- 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: The ECCA Industrial Technology: Machining, Welding, and Design program utilizes the state-of-the-art Parkhill Applied Technology Center at Parkland College. The program covers an introduction to computer numeric control (CNC) and CNC programming, with an emphasis placed on the fundamentals of CNC lathe and mill operations. Architectural, mechanical, and electrical applications of AutoCAD software are included in the program. Instruction will also include general machining procedures, such as operations of the drill press, lathe, and mill. Bench work operations will include layout and hand tools. Machine tool projects will be created using a cross section of machine tool equipment. Welding topics will include gas metal and arc welding fundamentals, welding safety, equipment adjustments, metal transfer, and shielding gases. This program includes a two-year sequence. Both year-one and year-two students will complete the courses listed below during the 19-20 school year. Scholarships are available from local companies, Frasca International, LSG, Inc., and HL Precision Manufacturing that provide tuition reimbursement and employment opportunities.

Parkland College Dual Credit Available

Course Number	Course Name	Credit Hours
CAD 124	Introduction to AutoCAD	3 Credit Hours
MFT 121	Basic Machine Processes	3 Credit Hours
WLD 112/212	Gas Metal Arc Welding/Advanced	4 Credit Hours
MFT 127	Introduction to CNC Programming	4 Credit Hours
		14 Total Credit Hours

Examples of Careers in 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 program prerequisites