

**NEW  
CASTLE  
CAREER  
CENTER**

**2023-24**

*Program Description  
Guide*

**NEW CASTLE CAREER CENTER**  
**Program Description Guide**  
**2023-24**

**TABLE OF CONTENTS**

Summary Chart	3
General Information	4
Schedule	4
Locations and Transportation	5
Pre-Enrollment for a First Year Program	5
Pre-Enrollment for a Second Year Program	5
Early College Option	5
Dual College Credits	5
Industry Certification	6
Academic Honors Diplomas & Technical Honors Diplomas	6
Career Program Descriptions	
Broadcasting I & II	6
Building Trades I	6
Building Trades II	7
CDL	7
Computer Operations - Computer Tech Support	8
Computer Operations - Networking Fundamentals	9
Cosmetology I & II	9
Criminal Justice I	10
Criminal Justice II	11
Culinary Arts I	12
Culinary Arts II	12
Dental Careers I & II	13
Education Professions I	14
Education Professions II	14
EMT / Public Safety	15
Graphic Design I	15
Graphic Design II	15
Health Careers I	16
Health Careers II	16
Interdisciplinary Cooperative Education (ICE)	17
Machine Trades I	18
Machine Trades II	18
Pre-Engineering I & II	19
Property & Facility Management I & II	20
Supply Chain/Logistics	21
Veterinary Careers I & II	22
Welding Technology I & II	23

## SUMMARY CHART

The following career programs are offered at New Castle Career Center (NCCC). The number of high school credits offered per school year and the grade level participation for each career program is listed. Detailed descriptions of each career program are included in the CAREER PROGRAM DESCRIPTIONS section of this document.

New Castle Career Center Course Title	Indiana Dept of Education (DOE) Course #	DOE Course Title	DOE Abbrev	High School Credits	High School Grade Level Participation	
Broadcasting I	7139	Principles of Radio and TV (1)	PRIN BROAD	2	11	12
	7306	Audio and Video Production (1)	AUD VID PROD	2		
	7307	Mass Media Performance (1)	AUD VID PROD	2		
Broadcasting II	7308	Radio & TV Broadcasting Capstone	RAD TV II	6		12
Building Trades I	7130	Principles of Construction Trades (1)	PRIN CON TR	2	11	12
	7123	Construction Trades: General Carpentry (1)	CON TRD GC	2		
	7122	Construction Trades: Framing and Finishing (1)	CON TRD FR FIN	2		
Building Trades II	7242	Construction Trades Capstone	CONST TECH I	6		12
Computer Tech Support	7183	Principles of Computing (1)	PRIN COMP INFO	2	11	12
	7180	Information Technology Fundamentals (1)	INFO TECH FUN	2		
	7181	Networking and Cybersecurity Operations (1)	INFO TEC SUP SER	2		
Networking Fundamentals	7245	Networking Fundamentals Capstone	IT SUPP CAP	6		12
CDL	7386	Principles of Transportation and Logistics	PRIN TRANS LOG	2		12
	7387	Commercial Drivers Operations Fundamentals	CDL OPER FUND	2		
	7388	Advanced Commercial Drivers Operations	ADV CDL FUND	2		
Cosmetology I	7330	Principles of Barbering and Cosmetology (1)	PRIN COSMO	2	11	
	7331	Barbering and Cosmetology Fundamentals (1)	STY COSMO	2		
	7332	Advanced Cosmetology (1)	ADV COSMO	2		
Cosmetology II	7334	Barbering and Cosmetology Capstone (3)	COSMO CAP	6		12
Culinary Arts I	7173	Principles of Culinary and Hospitality (1)	PRIN HOSP	2	11	12
	7171	Nutrition (1)	FD THRY NUT	2		
	7169	Culinary Arts (1)	CUL ARTS	2		
Culinary Arts II	7233	Culinary Capstone (1)	CUL ARTS CAP	6		12
Criminal Justice I	7193	Principles of Criminal Justice (1)	PRIN CR JUST	2	11	12
	7191	Law Enforcement Fundamentals (1)	LAW ENF CLT CRT	2		
	7188	Corrections and Cultural Awareness (1)	CORR	2		
Criminal Justice II	7231	Criminal Justice Capstone	CRIM JUST CAP	6		12
Dental Careers I	7135	Principles of Dental Careers (1)	PRIN DENT CAR	2	11	
	7316	Dental Careers Fundamentals	DENT CAR FUND	2		
	7317	Advanced Dental Careers	ADV DENT CAR	2		
Dental Careers II	7317	Dental Careers Capstone	DENT CAR CAP	6		12
Education Professions I	7161	Principles of Teaching (1)	PRIN TEACH	2	11	12
	7157	Child and Adolescent Development (1)	CHLD ADL DEV	2		
	7162	Teaching and Learning (1)	TEACH LRN	2		
Education Professions II	7267	Education Professions Capstone	ED PROF CAP	6		12
EMT / Public Safety	7168	Principles of Healthcare (1)	PRIN HLCR	2		12
	5274	Medical Terminology (1)	MED TERMS	2		
	7165	Emergency Medical Tech (1)	EMT	2		
Graphic Design I	7140	Principles of Digital Design (1)	PRIN DIG DES	2	11	12
	7141	Digital Design Graphics (1)	DIG DES GRAPH	2		

	5550	Graphic Design and Layout (1)	GRAPH DES LT	2			
Graphic Design II	7246	Digital Design Capstone (3)	DIG DES CAP	6			12
Health Careers I	7166 7168 5274	Healthcare Specialist (1) Principles of Healthcare (1) Med term (1)	HC SPEC CAN PRIN HLCR MED TERMS	2 2 2		11	12
Health Careers II	7255 5218 5216	Healthcare Specialist Capstone (1) Principles of Biomedical Science (1) Human Body Systems (1)	HC SPECPRIN BIOMED CAP HUMAN SYST	2 2 2			12
ICE	6162	Cooperative Education	COOP EDU	6			12
Machine Trades I	7109 7105 7107	Principles of Precision Machining (1) Machining Fundamentals (1) Advanced Precision Machining (1)	PRIN PREC MACH MACH FUN PREC MACH	2 2 2		11	12
Machine Trades II	7219	Precision Machining Capstone	PREC MACH CAP	6			12
Pre-Engineering I	4802 5644 5534	Principles of Design Technology (1) Principles of Engineering (1) Computer Integrated Manufacturing (1)	INT ENG DES PRNC ENG COMP INT MFG	6		11	12
Pre-Engineering II	5698	Engineering Design and Development	ENG DES DEV	6			12
Property & Facility Maintenance I	7130 7123	Principles of Construction Trades (1) Construction Trades: General Carpentry (1)	PRIN CON TR CON TRD GC	2 2		11	12
Property & Facility Maintenance II	7242	Construction Trades Capstone	CONST TECH I	6			12
Supply Chain/Logistics I	4562 7155 7142	Principles of Business Management Logistics Management Supply Chain Management	PRIN BUS LOG MGMT SUP CH MGMT	2 2 2		11	12
Supply Chain/Logistics II	7258	Supply Chain Management Capstone	SUP CH MGMT CAP	6			12
Veterinary Science I	7280 7281 5070	Principles of Veterinary Science (1) Veterinary Science (1) Advanced Life Science Animals (1)	PRIN VET SCI VET SCI ALS ANIML	2 2 2		11	12
Veterinary Science II	7282	Veterinary Science Capstone	VET SCI CAP	6			12
Welding I	7110 7111 7101	Principles of Welding Technology (1) Shielded Metal Arc Welding (1) Gas Welding Processes (1)	PRIN WEL TCH SHLD MAW GAS WEL PRC	2 2 2		11	12
Welding II	7226	Welding Technology Capstone	WELD TECH CAP	6			12

## GENERAL INFORMATION

### Schedule

All classes meet three (3) hours per day unless otherwise noted. Students attend either a morning or an afternoon session. The remainder of the school day is scheduled at the home school. Students enroll in career programs for the entire school year.

### Locations and Transportation

Most programs are located in New Castle either in the New Castle Career Center wing of New Castle High School, the Danielson Center, or at the New Castle EMS building. The Building Trades program has a construction site in a different location each year. Students enrolled in Strategic Marketing attend the career program at Tri High School, and students

enrolled in Broadcasting attend Knightstown Community High School. Students in several other programs will complete work experiences during the year at various locations in the area. These sites are coordinated by the career program instructor. Students are responsible for providing their own transportation as necessary.

#### Pre-Enrollment for a First-Year Program

Eight local school corporations work together to offer the courses that makeup New Castle Career Center (NCCC). Students from each high school have an equal opportunity to apply for and participate in career programs. Students obtain a pre-enrollment form from their counselor at the designated time, complete the form, and return it to their counselor. Each pre-enrollment form must be approved by the principal, counselor, and career program instructor before the student is enrolled in a career program. All students participate in an interview with the career program instructor prior to acceptance. Credits and grades earned in career programs become part of the student's home school record.

#### Pre-Enrollment for a Second Year Program

Students will receive the second-year pre-enrollment form from their career program instructor. The form must be completed, including the parent's signature, and returned to the career program instructor. The form will be sent to the home school counselor with the recommendation of the career program instructor regarding second-year participation. The form must be approved by the home school counselor and principal. Students may take one year of two complementary programs rather than two years of a single program. Discuss your career plan with your guidance counselor prior to completing a first-year pre-enrollment form for the second year. The student will be given preferred placement, with the recommendation of the counselor.

#### Early College Option

Seniors participating in career programs may also take advantage of the Early College option offered in partnership between New Castle Career Center and Ivy Tech Community College. Students who meet the requirements at Ivy Tech Community College, including placement testing, are eligible to take core academic courses at Ivy Tech Community College in New Castle. Courses currently include Introduction to Psychology, Introduction to Sociology, Fundamentals of Public Speaking, and English Composition I. The courses are general education courses required for many certificates and degree programs across different colleges. Anatomy and Physiology I and II may be added to the core courses. Classes may change in order to meet the needs of students. With the exception of Anatomy and Physiology, courses offered are part of the Core Transfer Library. Visit [transferIN.net](http://transferIN.net) to learn more about transferring credits between colleges. The Early College Option is offered at little or no cost to the student. For more information, see your guidance counselor.

#### Dual College Credits

Many career programs offer dual college credit opportunities. New Castle Career Center has dual credit agreements with Ivy Tech Community College, Vincennes University, and Purdue University. The benefits of dual credits include

1. Enriches the high school curriculum.
2. Introduces high school students to the rigors of college credit courses.
3. Helps students in the transition from high school to college.
4. Helps ensure the students will graduate from college on time.
5. Helps to satisfy the requirements for the Indiana Core 40 with Academic Honors and/or Technical Honors diplomas.
6. Helps parents and students assess the student's readiness for college.
7. **Significantly reduces the cost of a college education - most dual credits are offered to the student at no cost or at a significantly reduced cost.**

The number of dual credits available and the awarding institution varies by career program. Enrollment is required for all dual credits, and placement testing and/or pre-requisite courses are required for some. Placement testing is completed at NCCC or at the home high schools. Test scores determine dual credit eligibility for those career programs that require placement testing. To receive dual credits, students must successfully complete the work required. Students may be dropped from dual credit eligibility due to insufficient progress in a course. Career program instructors provide guidance on dual credit procedures, and all paperwork is completed through NCCC. In some cases, a fee may apply. The ability to transfer dual credits is dependent upon the receiving institution. Visit [transferIN.net](http://transferIN.net) to learn more about transferring

credits between colleges. Dual credits offered in each career program are subject to change at any time. For the most current information available, contact New Castle Career Center.

Industry Certification

Many career programs offer opportunities for students to earn industry certification. The certification process documents skills obtained by students within a career area. The skills and certification are recognized by employers and provide students with an advantage career-related to the workforce and/or to postsecondary education. The industry certifications available vary by career program. Testing is required for all industry certifications. Students must successfully complete all requirements to receive certification. In some cases, a fee may apply. Industry certifications offered in each career program are subject to change at any time. For the most current information available, contact New Castle Career Center.

Academic & Technical Honors Diplomas

Students who participate in the career programs may be eligible to earn both Academic Honors Diplomas (AHD) and Technical Honors Diplomas (THD), depending on the courses they have successfully completed throughout high school and meeting all other diploma requirements.

For more information on using credits and credentials earned in career programs to meet requirements for Academic and Technical Honors Diplomas, see your guidance counselor or contact New Castle Career Center.

**CAREER PROGRAM DESCRIPTIONS**

**Broadcasting I & II**

*1 or 2-Year Program*

Broadcasting provides students experience in the areas of radio announcing, writing, news, sports, production, recording studio engineering, and music programming on the award-winning student station, Classic Hits 90.7 FM, WKPW. Daily duties include on-air shifts, hourly news and sportscasts production, and weekly production assignments. Year 2 students are assigned more complex, independent projects and are expected to fill lead on-air roles.

Upon completion of this program, students continue their education in 2 and 4-year degree programs at the postsecondary level as well as enter employment in the communications field at radio stations, TV stations, and production companies.

Location	Knightstown Community High School
Dual College Credits:	<i>BCST 102-Introduction to Audio/Video Production</i>
	<i>BCST 120-Audio Production I</i>

**Building Trades**

**I**

*1 or 2-Year Program*

7130 Principles of Construction Trades PRIN CON TR Principles of Construction Trades prepares students with the basic skills needed to continue in a construction trade field. Topics will include an introduction to the types and use for common hand and power tools, learning the types and basic terminology associated with construction drawings, and basic safety.

Additionally, students will study the roles of individuals and companies within the construction industry and reinforce the mathematical and communication skills necessary to be successful in the construction field.

7123 Construction Trades: General Carpentry CON TRD GC Construction Trades: General Carpentry builds upon the skills learned in the Principles of Construction Trades and examines the basics of framing. This includes studying the procedures for laying out and constructing floor systems, wall systems, ceiling joist and roof framing, and basic stair layout. Additionally, students will be introduced to building envelope systems.

7122 Construction Trades: Framing and Finishing CON TRD FR FIN Construction Trades: Framing and Finishing prepares students with advanced framing skills along with interior and exterior finishing techniques. Topics include roofing applications, thermal and moisture protection, exterior finishing, cold-formed steel framing, drywall installation and finishing, doors, and door hardware, suspended ceilings, window, door, floor, and ceiling trim, and cabinet installation.

Location	New Castle Career Center & Current Job Site
Industry Certifications	<i>OSHA Safety Certification &amp; NCCER</i>
Dual College Credits:	<i>BCTI 100-Intro to Construction Technology</i>
	<i>BCTI 101-Intro to Carpentry, Part I</i>
	<i>BCTI 102-Intro to Carpentry, Part II</i>
	<i>BCTI 103-Carpentry Framing and Finishing I</i>
	<i>BCTI 104-Carpentry Framing and Finishing II</i>

## Building Trades

### II

7242 Construction Trades Capstone CSTR TR CAP The Construction Trades Capstone course covers the basics of electricity and working with concrete. Electrical topics include the National Electric Code, electrical safety, electrical circuits, basic electrical construction drawings, and residential electrical services. Students may also gain an understanding of concrete properties, foundations, slab-on-grades, and vertical and horizontal formwork. The course prepares students for the NCCER Carpentry Forms Level 3 and Electrical Level 1 certificates.

Location	New Castle Career Center & Current Job Site
Industry Certifications	<i>OSHA Safety Certification &amp; NCCER</i>

## CDL

### *1 year program*

7386 Principles of Transportation and Logistics examines the structure and importance of the commercial transportation industry in the logistics sector of business. Topics covered include an in-depth examination of the various modes of transportation including discussions of regulations, economics, characteristics, and

development in major transportation modes. Also discussed are costing and pricing issues in transportation and relationship management between buyers and sellers of transportation. Additionally, this course introduces students to an overview of the CDL licensure and prepares them to get their CDL permit. Students are required to get a Department of Transportation Physical and Drug Screen.

7387 Commercial Drivers Operation Fundamentals introduces students to an orientation of the CDL industry, the CDL license, driver qualifications, and the commercial vehicle. The vehicle control systems are reviewed and discussed. The vehicle systems including engine, suspension, electrical and many others are reviewed in detail. The vehicle inspection is practiced and applied. Range and on the road training in a tractor trailer are major components of this course. Students will discuss driving in a variety of conditions including at night, emergency situations, skidding, and extreme weather. Students will practice many different driving maneuvers including backing, turning, shifting, coupling, space and speed management in order to prepare for the CDL A exam. This course must be taken concurrently with Advanced Commercial Drivers Operations.

7388 Students will continue to practice until mastery of the pre-trip inspection which is a critical component of passing the CDL A exam. Administrative and professional components of being a professional driver are discussed and explained including, hours of service, accident reporting, personal health, communication and Compliance, Safety, and Accountability (CAS). This course must be taken concurrently with Commercial Drivers Operations Fundamentals. Upon successful completion of Commercial Drivers Operation Fundamentals and Advanced Commercial Drivers Operations the student will be eligible to take the CDL A examination.

Location	Ivy Tech New Castle & Ivy Tech Muncie
Industry Certifications	CDL A or CDL B

## Computer Operations

I

1 or 2-Year Program

7183 Principles of Computing PRIN COMP INFO Principles of Computing provides students the opportunity to explore how computers can be used in a wide variety of settings. The course will begin by exploring trends of computing and the necessary skills to implement information systems. Topics include operating systems, database technology, cybersecurity, cloud implementations, and other concepts associated with applying the principles of good information management to the organization. Students will also have the opportunity to utilize basic programming skills to develop scripts designed to solve problems. Students will learn about algorithms, logic development, and flowcharting.

7180 Information Technology Fundamentals INFO TECH FUN Information Technology Fundamentals provide the necessary competencies required for an entry-level Information Technology professional. Students will have the knowledge required to assemble components based on customer requirements, install, configure and maintain devices/software for end users, understand the basics of networking and security, properly and safely diagnose, resolve and document common hardware and software issues while applying troubleshooting skills. Students will also learn appropriate customer support, understand the basics of virtualization, desktop imaging, and deployment. This course should also prepare students for the CompTIA A+ Certification Exam.

7181 Networking and Cybersecurity Operations INFO TECH SUP SER Advanced Information Technology will provide students with the fundamental concepts in networking and cybersecurity. Students are introduced to the principles and concepts of computer networking, covering the architecture, components, and operations of routers and switches in a



small network. Students learn how to configure a router and a switch for basic functionality. Students will be able to troubleshoot routers and switches and resolve common issues. The students will also explore the field of Cyber Security/Information Assurance focusing on the technical and managerial aspects of the discipline. Students will be introduced to the basic terminology, concepts, and best practices of computer/network security and the roles and responsibilities of management/security personnel. The students will learn the technologies used and techniques involved in creating a secure computer networking environment including authentication and the types of attacks against an organization

Location	New Castle Career Center
Industry Certifications	<i>Microsoft Technology Associate (MTA) CompTIA A+</i>
Dual College Credits:	<i>INFM 109-Informatics Fundamentals</i>
	<i>ITSP 132-IT Support Essentials I</i>

## Computer Operations

### II

7245 IT Operations: IT Support Capstone IT SUPP CAP IT Support Capstone students will acquire the skills and knowledge needed to provide tier 1 technical support services. The student will learn troubleshooting and problem-solving in working with end-users using various digital tools such as helpdesk software, knowledge bases, ticket management systems, and other tier 1 computer-related support services. Students will also learn to implement, administer, and troubleshoot Information systems using the Microsoft Windows clients and servers in an enterprise environment. Students will be introduced to managing applications, files, folders, and devices in a Windows active directory environment. Additionally, students have the chance to understand and apply Linux and Virtualization concepts.

Location	New Castle Career Center
Industry Certifications	<i>CompTIA A+</i>
Dual College Credits:	<i>ITSP 134-IT Support Essentials II</i>
	<i>NETI 109-Networking I</i>

## Cosmetology

### I

*2-Year Program – must initially enroll as a Junior and continue as a Senior*

7330 Principles of Cosmetology offers an introduction to cosmetology with emphasis on basic practical skills and theories including roller control, quick styling, shampooing, hair coloring, permanent waving, facials, manicuring, business and personal ethics, and bacteriology and sanitation. Successful completion of the course requires at least 375 Cosmetology studio hours.

7331 Barbering and Cosmetology Fundamentals focuses on the development of practical skills introduced in Principles of Cosmetology. Clinical application and theory in the science of cosmetology are introduced. Successful completion of the course requires at least 375 Cosmetology studio hours.

7332 Advanced Cosmetology will emphasize the development of advanced skills in styling, hair coloring, permanent waving, facials and manicuring. Students will also study anatomy and physiology as it applies to cosmetology. Successful High School Course Titles and Descriptions 2022-2023 308 completion of the course requires at least 375 Cosmetology studio hours.

Location	New Castle Career Center
Dual College Credits:	<i>COSM 100-Cosmetology I</i> <i>COSM 150-Cosmetology II</i>

## **Cosmetology**

### **II**

7334 Barbering and Cosmetology Capstone builds and improves previously developed skills with emphasis on developing individual techniques. Professionalism, shop management, psychology in relation to cosmetology, and preparation for state board examination are stressed. Successful completion of the course requires at least 375 Cosmetology studio hours.

Location	New Castle Career Center
Industry Certifications	<i>Indiana State Board of Cosmetology License</i>
Dual College Credits:	<i>COSM 200-Cosmetology III</i> <i>COSM 250-Cosmetology IV</i>

## **Criminal Justice**

### **I**

#### *1 or 2-Year Program*

7193 Principles of Criminal Justice PRIN CR JUST Principles of Criminal Justice covers the purposes, functions, and history of the three primary parts of the criminal justice system: law enforcement, courts, and corrections. This course further explores the interrelationships and responsibilities of these three primary elements of the criminal justice system.

7191 Law Enforcement Fundamentals LAW ENF CLT AWR Law Enforcement Fundamentals Critically examines the history and nature of the major theoretical perspectives in criminology, and the theories found within those perspectives. Analyzes the research support for such theories and perspectives, and the connections between theory and criminal justice system practice within all the major components of the criminal justice system. Demonstrates the application of specific theories to explain violent and non-violent criminal behavior on both the micro and macro levels of analysis. Additionally, this course will introduce fundamental law enforcement operations and organizations. This includes the evolution of law enforcement at federal, state, and local levels.

7188 Corrections and Cultural Awareness CRT CORR Corrections and Cultural Awareness emphasizes the study of American criminal justice problems and systems in historical and cultural perspectives, as well as discussing social and public policy factors affecting crime. Multidisciplinary and multicultural perspectives are stressed. Additionally, this course takes a further examination of the American correctional system; the study of administration of local, state, and federal correctional agencies. The examination also includes the history and development of correctional policies

and practices, criminal sentencing, jails, prisons, alternative sentencing, prisoner rights, rehabilitation, and community corrections including probation and parole. Current philosophies of corrections and the debates surrounding the roles and effectiveness of criminal sentences, institutional procedures, technological developments, and special populations are discussed.

Location	Henry County Emergency Management Training Room (Near the courthouse)
Industry Certifications	TBA
Dual College Credits:	LAWE 100-Survey of Criminal Justice LAWE 101-Basic Police Operations

### Criminal Justice

#### II

7231 Criminal Justice Capstone CRIM JUST CAP The Criminal Justice Capstone course allows students to complete additional instruction to earn a postsecondary certificate and should include a work-based learning component such as job shadowing, internship, etc. once the core content is completed. Note that there may be age restrictions on work-based learning components.

Location	Henry County Emergency Management Training Room (Near the courthouse)
Industry Certifications	TBA
Dual College Credits:	LAWE 145-Ethics and Professionalism in Criminal Justice LAWE 150-Criminal Minds and Deviant Behavior

### Culinary

#### I

##### 1 or 2-Year Program

7173 Principles of Culinary and Hospitality is designed to develop an understanding of the hospitality industry and career opportunities, and responsibilities in the foodservice and lodging industry. Introduces procedures for decision making which affect operation management, products, labor, and revenue. Additionally, students will learn the fundamentals of food preparation, basic principles of sanitation, service procedures, and safety practices in the foodservice industry including proper operation techniques for equipment.

7171 Nutrition FD THRY NUT Nutrition students will learn the characteristics, functions, and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will be made aware of nutrient needs throughout the life cycle and apply those principles to menu planning and food preparation. This course will engage students in hands-on learning of nutritional concepts such as preparing nutrient-dense meals or examining the nutritional needs of student-athletes

7169 Culinary Arts CUL ARTS Culinary Arts teach students how to prepare the four major stocks, the five mother sauces

(in addition to smaller sauces), and various soups. Additional emphasis is placed on the further development of classical cooking methods. This course will also present the fundamentals of baking science including terminology, ingredients, weights and measures, and proper use and care of equipment. Students will produce yeast goods, pies, cakes, cookies, and quick bread.

Location	New Castle Career Center
Industry Certifications	<i>ServSafe</i> <i>CPR</i>
Dual College Credits:	<i>HOSP 101-Sanitation and First Aid</i>
	<i>HOSP 102-Basic Food Theory &amp; Skills</i>
	<i>HOSP 114-Intro to Hospitality</i>

## **Culinary II**

7233 Culinary Arts Capstone CUL ARTS CAP This course covers the techniques and skills needed in breakfast cookery as well as insight into the pantry department. Various methods of preparation of eggs, pancakes, waffles and cereals will be discussed. Students will receive instruction in salad preparation, salad dressing, hot and cold sandwich preparation, garnishes, and appetizers. This course also covers the necessary skills for proper recruiting, staffing, training, and management of employees at various levels. The course will help prepare the student for the transition from employee to supervisor. Additionally, it will help the student evaluate styles of leadership, and develop skills in human relations and personnel management.

Location	New Castle Career Center
Industry Certifications	<i>ServSafe</i> <i>CPR</i>
Dual College Credits:	<i>HOSP 104-Nutrition</i>
	<i>HOSP 105-Intro to Baking</i>
	<i>HOSP 272-The Tourism System</i>

## **Dental Careers I & II**

*2-Year Program – must initially enroll as a Junior and continue as a Senior*

The Dental Careers program provides students with opportunities to learn skills needed when assisting dentists with chair-side procedures and daily office responsibilities. Students must complete both Dental Careers I and II in order to cover the curriculum and standards. Junior students enroll in Dental Careers I with the intention of completing both years. Due to space limitations, senior students are generally not accepted in the Dental Careers I program. Areas of instruction include tooth identification and terminology, disinfection/sterilization, oral health, dental materials,

instrumentation, office records, digital x-rays, radiation safety, hygiene, office management software, and OSHA guidelines. Dental Careers I and II students complete clinical experiences in local dental offices. Students participate in the second year of the program to receive advanced training in expanded dental assisting and additional experience in private practices. Once students complete 2 years of Dental Careers and 2 years of work experience, they are eligible to test for their CDA (Certified Dental Assistant).

Students completing this program may pursue 2 and 4-year postsecondary degrees related to the dental field or may become employed in dentist offices or dental labs.

Location	New Castle Career Center
Industry Certifications	<i>Indiana Radiology Provisional License</i>
Dual College Credits:	<i>HIMT 110-Medical Terminology</i>
	<i>HIMT 102-Intro to Healthcare</i>

### Education Professions

#### I

##### 1 or 2-Year Program

7161 Principles of Teaching PRIN TEACH This course provides a general introduction to the field of teaching. Students will explore educational careers, teaching preparation, and professional expectations as well as requirements for teacher certification. Current trends and issues in education will be examined. A minimum 20-hour classroom observation experience is required for the successful completion of this course.

7157 Child and Adolescent Development CHLD ADL DEV Child and Adolescent Development examines the physical, social, emotional, cognitive, and moral development of the child from birth through adolescence with a focus on the middle years through adolescence. Basic theories of child development, biological and environmental foundations of development, and the study of children through observation and interviewing techniques are explored. The influence of parents, peers, the school environment, culture, and the media are discussed. An observation experience up to 20 hours may be required for completion of this course. This course has been approved to be offered for dual credit. Students pursuing this course for dual credit are still required to meet the minimum prerequisites for the course and pass the course with a C or better in order for dual credit to be awarded.

7162 Teaching and Learning TEACH LRN Teaching and Learning provides students the opportunity to apply many of the concepts that they have learned throughout the Education Profession Pathway. In addition to a focus on best practices, this course will provide an introduction to the role that technology plays in the modern classroom. Through hands-on experience with educational software, utility packages, and commonly used microcomputer hardware, students will analyze ways to integrate technology as a tool for instruction, evaluation, and management.

Location	New Castle Career Center & Local Education Sites
Dual College Credits:	<i>EDUC 101-Intro to Teaching</i>
	<i>EDUC 121-Childhood and Adolescent</i>

	<i>Development</i>
--	--------------------

## Education Professions

### II

The Education Professions Capstone provides an extended opportunity for field experience to further apply concepts that have been presented throughout the pathway. Students will also have the opportunity to explore the topics of the exceptional child and literacy development through children’s literature. Students will gain a deeper understanding of inclusive teaching techniques along with policies, theories, and laws related to special education. Students interested in pursuing a career in Elementary Education are encouraged to also study the benefits of using children’s literature in the classroom. This course may be further developed to include specific content for students interested in pursuing a career in secondary education.

Location	New Castle Career Center & Local Education Sites
Dual College Credits:	<i>EDUC 223-Literacy Development through Children’s Literature</i>
	<i>EDUC 230-The Exceptional Child</i>

## EMT

### *1-Year Program – Seniors Only*

7168 Principles of Healthcare PRIN HLCR Principles of Healthcare content includes skills common to specific health career topics such as patient nursing care, dental care, animal care, medical laboratory, public health, and an introduction to healthcare systems. Lab experiences are organized and planned around the activities associated with the student’s career objectives.

5274 Medical Terminology MED TERMS Medical Terminology prepares students with language skills necessary for effective, independent use of health and medical reference materials. It includes the study of health and medical abbreviations, symbols, and Greek and Latin word part meanings, all taught within the context of body systems. This course builds skills in pronouncing, spelling, and defining new words encountered in verbal and written information in the healthcare industry. Students have the opportunity to acquire essential skills for accurate and logical communication, and interpretation of medical records. Emphasis is on forming a foundation of a medical vocabulary including; appropriate and accurate meaning, spelling, and pronunciation of medical terms, and abbreviations, signs, and symbols.

7165 Emergency Medical Tech EMT This course is based on the training program developed by the Department of Transportation and the Emergency Medical Services Commission of Indiana. It covers theories, techniques, and operational aspects of pre-hospital emergency care within the scope and responsibility of the emergency medical technician (EMT). It requires laboratory practice and clinical observation in a hospital emergency room and ambulance. Successful completion of the course meets national requirements to test for certification as an NREMT.

Location	New Castle EMS Building (432 Broad St)
Industry Certifications	<i>IN Department of Homeland Security EMT</i>

	<i>License</i>
--	----------------

**Graphic Design**

**I**

*1 or 2-Year Program*

7140 Principles of Digital Design PRIN DIG DES Principles of Digital Design introduces students to fundamental design theory. Investigations into design theory and color dynamics will provide experiences in applying design theory, ideas and creative problem solving, critical peer evaluation, and presentation skills. Students will have the opportunity to apply the design theory through an understanding of basic photographic theory and technique. Topics will include image capture, processing, various output methods, and light.

7141 Digital Design Graphics DIG DES GRAPH Digital Design Graphics will help students to understand and create the most common types of computer graphics used in visual communications. Skills are developed through work with professional vector-based and page layout software used in the industry. Additionally, students will be introduced to a full range of image input technology and manipulation including conventional photography, digital imaging, and computer scanners. Students will learn to communicate concepts and ideas through various imaging devices.

5550 Graphic Design and Layout GRAPH DES LT Graphic Design and Layout teach design process and the proper and creative use of type as a means to develop effective communications for global, corporate and social application. Students will create samples for a portfolio, which may include elements or comprehensive projects in logo, stationery, posters, newspaper, magazine, billboard, and interface design.

Location	New Castle Career Center
Industry Certifications	<i>Adobe Illustrator</i> <i>Adobe Publisher</i>
Dual College Credits:	<i>DESN 120-Computer Illustration</i> <i>DESN 155-Computer Page Layout</i> <i>ARTT 111-Visual Design</i>

**Graphic Design**

**II**

7246 Digital Design Capstone DIG DES CAP The Digital Design Capstone course provides students the opportunity to dive deeper into advanced concepts of Visual Communication including user experience/user interface design, video production editing, animation, and/or web design. Depending on the length of the course, students may focus their efforts on one area or explore multiple aspects.

7138 Interactive Media Design IN MED DES Interactive Media Design focuses on the tools, strategies, and techniques for interactive design and emerging technologies, like web and social media. Students will learn the basics of planning, shooting, editing, and post-producing video and sound. Additionally, students will explore the process of integrating text, graphics, audio, and video for effective communication of information.

Location	New Castle Career Center
Industry Certifications	<i>Adobe Illustrator Adobe Publisher</i>
Dual College Credits:	<i>DESN 140-Computer Imaging</i>

## Health Careers

### I

#### 1 or 2-Year Program

7166 Healthcare Specialist: CNA HC SPEC CNA The Healthcare Specialist: CNA prepares individuals desiring to work as nursing assistants with the knowledge, skills, and attitudes essential for providing basic care in extended care facilities, hospitals, and home health agencies under the direction of licensed nurses. The course will introduce students to the disease process and aspects of caring for a long-term care resident with dementia. Individuals who successfully complete this course are eligible to apply to sit for the Indiana State Department of Health (ISDH) certification exam for nursing assistants. This course meets the minimum standards set forth by the ISDH for Certified Nursing Assistant training and for health care workers in long-term care facilities.

7168 Principles of Healthcare PRIN HLCR Principles of Healthcare content includes skills common to specific health career topics such as patient nursing care, dental care, animal care, medical laboratory, public health, and an introduction to healthcare systems. Lab experiences are organized and planned around the activities associated with the student's career objectives.

5274 Medical Terminology MED TERMS Medical Terminology prepares students with language skills necessary for effective, independent use of health and medical reference materials. It includes the study of health and medical abbreviations, symbols, and Greek and Latin word part meanings, all taught within the context of body systems. This course builds skills in pronouncing, spelling, and defining new words encountered in verbal and written information in the healthcare industry. Students have the opportunity to acquire essential skills for accurate and logical communication, and interpretation of medical records. Emphasis is on forming a foundation of a medical vocabulary including; appropriate and accurate meaning, spelling, and pronunciation of medical terms, and abbreviations, signs, and symbols.

Location	Danielson Center
Industry Certifications	<i>CPR/AED Professional Rescuer Indiana State CNA</i>
Dual College Credits:	<i>HLHS 100-Intro to Healthcare</i>
	<i>HLHS 107-CNA Preparation</i>
	<i>HLHS 101-Medical Terminology</i>
	<i>HLHS 111-Health &amp; Wellness for Life</i>
	<i>HLHS 113-Dementia Care</i>

## Health Careers



## II

**7255 Healthcare Specialist Capstone HC SPEC CAP** The capstone course will provide Healthcare students with acquiring additional knowledge and skills necessary to work in a variety of healthcare settings beyond a long-term care facility, including hospitals, doctor's offices, and clinics. Students can accomplish this goal by completing coursework that will cover topics such as Medical Law and Ethics, Electronic Health Records, and/or Behavioral Health. Schools may offer additional healthcare certifications such as the Certified Clinical Medical Assistant or Phlebotomy along with the coursework or in place of the coursework.

**5218 Principles of Biomedical Sciences PRIN BIOMED** Principles of the Biomedical Sciences provide an introduction to this field through "hands-on" projects and problems. Student work involves the study of human medicine, research processes, and an introduction to bioinformatics. Students investigate the human body systems and various health conditions including heart disease, diabetes, hypercholesterolemia, and infectious diseases. A theme through the course is to determine the factors that led to the death of a fictional person. After determining the factors responsible for the death, the students investigate lifestyle choices and medical treatments that might have prolonged the person's life. Key biological concepts included in the curriculum are homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease. Engineering principles such as the design process, feedback loops, fluid dynamics, and the relationship of structure to function will be included where appropriate. The course is designed to provide an overview of all courses in the Biomedical Sciences program and to lay the scientific foundation necessary for student success in the subsequent courses. NOTE: This course aligns with the PLTW Principles of Biomedical Sciences curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

**5216 Human Body Systems HUMAN SYST** Human Body Systems is a course designed to engage students in the study of basic human physiology and the care and maintenance required to support complex systems. Using a focus on human health, students will employ a variety of monitors to examine body systems (respiratory, circulatory, and nervous) at rest and under stress, and observe the interactions between the various body systems. Students will use appropriate software to design and build systems to monitor body functions. NOTE: This course aligns with the PLTW Human Body Systems curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

Location	Danielson Center
Industry Certifications	<i>Patient Care Technician Certificate</i>
Dual College Credits:	<i>HLHS 121-Customer Relations</i>
	<i>HLHS 125-Behavioral Health</i>

## ICE

**6162 Cooperative Education COOP EDU** Cooperative Education is an approach to employee training that spans all career and technical education program areas through school-based instruction and on-the-job training. Time allocations are a minimum of fifteen hours per week of on-the-job training and approximately five hours per week of school-based instruction, focused on employability skills development. Additionally, all state and federal laws and regulations related to student employment and cooperative education must be followed.

Location	New Castle Career Center and Local Job Sites
Dual College Credits:	<i>Ivy Y T 111</i>

## Machine Trades

### I

7109 Principles of Precision Machining PRIN PREC MACH Principles of Precision Machining will provide students with a basic understanding of the processes used to produce industrial goods. Classroom instruction and labs will focus on shop safety, measurement, layout, blueprint reading, shop math, metallurgy, basic hand tools, milling, turning, grinding, and sawing operations. This course prepares the student for the optional National Institute for Metalworking Skills (NIMS) Measurement, Materials, & Safety certification that may be required for college dual credit.

7105 Precision Machining Fundamentals MACH FUN Precision Machining Fundamentals will build a foundation in conventional milling and turning. Students will be instructed in the classroom on topics of shop safety, theory, industrial terminology, and calculations. Lab work will consist of the setup and operation of vertical and/or horizontal milling machines and engine lathes. This course prepares the student for the optional National Institute for Metalworking Skills (NIMS) Milling I certification that may be required for college dual credit.

7107 Advanced Precision Machining PREC MACH Advanced Precision Machining will build upon the Turning and Milling processes learned in Precision Machining Fundamentals and will build a foundation in abrasive process machines. Students will be instructed in the classroom on topics of shop safety, theory, industrial terminology, and calculations associated with abrasives. Lab work will consist of the setup and operation of bench grinders and surface grinders. Additionally, students will be introduced to Computerized Numeric Controlled (CNC) setup, operations, and programming. This course prepares the student for the optional National Institute for Metalworking Skills (NIMS) Grinding I certification that may be required for college dual credit.

Location	New Castle Career Center
Dual College Credits:	<i>MTTC 101-Intro to Machining</i>
	<i>MTTC 102-Turning Processes I</i>
	<i>MTTC 103-Milling Processes II</i>
	<i>MTTC 106-Print Interpretation</i>
	<i>MTTC 105-Abrasive Processes I</i>
	<i>MTTC 110-Turning and Milling Processes</i>

## Machine Trades

### II

7219 Precision Machining Capstone

PREC MACH CAP Precision Machining Capstone is an in-depth study of skills learned in Precision Machining I, with a stronger focus on CNC setup/operation/programming. Students will be introduced to two-axis CNC lathe programming and three-axis CNC milling machine programming. Develops the theory of programming in the classroom with applications of the program accomplished on industry-type machines. Studies terminology of coordinates, cutter paths, angle cutting, and linear and circular interpolation. Classroom activities will concentrate on precision set-up and inspection work, as well as machine shop calculations. Students will develop skills in advanced machining and measuring parts involving tighter tolerances and more complex geometry. A continued focus on safety will also be presented.

Location	New Castle Career Center
Industry Certifications	<i>NIM Certification Precision Machining Certificate Technical Certificate</i>
Dual College Credits:	<i>MTTC 107-CNC Set Up and Operations I</i>
	<i>MTTC 208-CNC Mill Programming</i>
	<i>MTTC 209-CNC Lathe Programming</i>
	<i>IVY Y T 111</i>

### Pre-Engineering

I

4802 Introduction to Engineering Design INT ENG DES Introduction to Engineering Design is a fundamental pre-engineering course where students become familiar with the engineering design process. Students work both individually and in teams to design solutions to a variety of problems using industry-standard sketches and current 3D design and modeling software to represent and communicate solutions. Students apply their knowledge through hands-on projects and document their work with the use of an engineering notebook. Students begin with completing structured activities and move to solve open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Ethical issues related to professional practice and product development are also presented. NOTE: This course aligns with the PLTW Introduction to Engineering Design curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

5644 Principles of Engineering PRNC ENG Principles of Engineering is a course that focuses on the process of applying engineering, technological, scientific, and mathematical principles in the design, production, and operation of products, structures, and systems. This is a hands-on course designed to provide students interested in engineering careers to explore experiences related to specialized fields such as civil, mechanical, and materials engineering. Students will engage in research, development, planning, design, production, and project management to simulate a career in engineering. The topics of ethics and the impacts of engineering decisions are also addressed. Classroom activities are organized to allow students to work in teams and use modern technological processes, computers, CAD software, and production systems in developing and presenting solutions to engineering problems. Schools may use the PLTW curriculum to meet the standards for this course. NOTE: This course aligns with the PLTW Principles of Engineering curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

5534 Computer Integrated Manufacturing COMP INT MFG Computer Integrated Manufacturing is a course that applies principles of rapid prototyping, robotics, and automation. This course builds upon the computer solid modeling skills developed in Introduction to Engineering Design. Students will use computer-controlled rapid prototyping and CNC equipment to solve problems by constructing actual models of their three-dimensional designs. Students will also be introduced to the fundamentals of robotics and how this equipment is used in an automated manufacturing environment. Students will evaluate their design solutions using various techniques of analysis and make appropriate modifications before producing their prototypes. NOTE: This course aligns with the PLTW Computer Integrated Manufacturing curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

Location	New Castle Career Center
Dual College Credits:	<i>DESN 101-Intro to Design Technology</i>
	<i>DESN 113-2 D Computer-Aided Design</i>

## Pre-Engineering

### II

5698 Engineering Design and Development ENG DES DEV Engineering Design and Development is an engineering research course in which students work in teams to research, design, test, and construct a solution to an open-ended engineering problem. The product development life cycle and a design process are used to guide the team to reach a solution to the problem. The team and/or individual(s) communicates their solution to a panel of stakeholders at the conclusion of the course. As the capstone course in the Engineering Pathway, EDD engages students in critical thinking, problem-solving, time management, and teamwork skills. NOTE: This course aligns with the PLTW Engineering Design and Development curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

Location	New Castle Career Center
Dual College Credits:	<i>DESN 104-Mechanical Graphics</i>

## Property and Facilities Management

### I

7130 Principles of Construction Trades PRIN CON TR Principles of Construction Trades prepares students with the basic skills needed to continue in a construction trade field. Topics will include an introduction to the types and use for common hand and power tools, learning the types and basic terminology associated with construction drawings, and basic safety. Additionally, students will study the roles of individuals and companies within the construction industry and reinforce the mathematical and communication skills necessary to be successful in the construction field.

7123 Construction Trades: General Carpentry CON TRD GC Construction Trades: General Carpentry builds upon the skills learned in the Principles of Construction Trades and examines the basics of framing. This includes studying the procedures for laying out and constructing floor systems, wall systems, ceiling joist and roof framing, and basic stair layout. Additionally, students will be introduced to building envelope systems.

7122 Construction Trades: Framing and Finishing CON TRD FR FIN Construction Trades: Framing and Finishing prepares students with advanced framing skills along with interior and exterior finishing techniques. Topics include roofing applications, thermal and moisture protection, exterior finishing, cold-formed steel framing, drywall installation and finishing, doors, and door hardware, suspended ceilings, window, door, floor, and ceiling trim, and cabinet installation.

Location	New Castle Career Center & Job Sites
Industry Certifications	<i>OSHA Safety Certification</i> <i>NCCER</i>
Dual College Credits:	<i>BCTI 100-Intro to Construction Technology</i>

	<i>BCTI 101-Intro to Carpentry, Part I</i>
--	--

**Property and Facilities Management**

**II**

7242 Construction Trades Capstone CSTR TR CAP The Construction Trades Capstone course covers the basics of electricity and working with concrete. Electrical topics include the National Electric Code, electrical safety, electrical circuits, basic electrical construction drawings, and residential electrical services. Students may also gain an understanding of concrete properties, foundations, slab-on-grades, and vertical and horizontal formwork. The course prepares students for the NCCER Carpentry Forms Level 3 and Electrical Level 1 certificates.

Location	New Castle Career Center & Job Sites
Industry Certifications	<i>OSHA Safety Certification NCCER</i>

**Supply Chain/Logistics**

**I**

4562 Principles of Business Management examines business ownership, organization principles and problems, management, control facilities, administration, financial management, and development practices of business enterprises. This course will also emphasize the identification and practice of the appropriate use of technology to communicate and solve business problems and aid in decision making. Attention will be given to developing business communication, problem-solving, and decision-making skills using spreadsheets, word processing, data management, and presentation software.

7155 Logistics Management provides students the opportunity to explore how essential managerial functions relate to the various components of a logistics operation. Logistics concepts are approached from a manufacturing perspective with a focus on system integration and automation and lean manufacturing operations. Topics will include logistics systems, supply chain management, order, demand inventory and warehouse management, and automated components of a logistics system. Students will be prepared for the MSSC Certified Logistics Associate (CLA) and MSSC Certified Logistics Technician (CLT) certifications.

7142 Supply Chain Management will build upon the knowledge and skills developed in the Logistics Management course by focusing on specific aspects of Supply Chain Management such as supply chain strategy, planning and design, customer service, purchasing, forecasting, inventory and warehouse management, as well as an in-depth study of transportation systems. Students will examine various modes of transportation and their associated characteristics, economics, and regulations.

Location	Ivy Tech, New Castle
	<i>BOAT 207- Integrated Microsoft Office Applications</i>
	<i>BUSN 105 Principles of Management</i>

	<i>LOGM 127, Introduction to Logistics</i>
	<i>LOGM 227, Supply Chain Management</i>
	<i>LOGM 229, Transportation Systems</i>

### Supply Chain/Logistics

#### II

7258 Supply Chain Management Capstone course will build upon the knowledge and skills learned in previous courses by taking a deeper dive into Procurement, Operations Management, Lean Manufacturing Systems.

### Vet Science

#### I

5211 Veterinary Careers I VET CRS I Veterinary Careers I is a lab-intensive course that introduces students to animal care and veterinary medicine. Through classroom and field experiences, students will attain the necessary skills to demonstrate standard protocols that are used in veterinary careers. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from high school, to post-secondary opportunities, and to work in a variety of health science careers. Students are encouraged to focus on self-analysis to aid in their career selection. Job seeking and job maintenance skills, personal management skills, and completion of the application process for admission into a post-secondary program are also areas of focus. Participation in HOSA or FFA encourages the development of leadership, communication, career-related skills, and opportunities for community service.

Location	New Castle Career Center
Dual College Credits:	<i>AGR 103-Animal Science</i>
	<i>HIMT 110-Medical Terminology</i>

### Vet Science

#### II

5212 Veterinary Careers II VET CRS II Veterinary Careers II is an extended laboratory experience designed to provide students with the opportunity to assume the role of a veterinary assistant, and practice technical skills previously learned in the classroom; all while working at a qualified clinical site under the direction of licensed veterinarians. These sites may include animal clinics, hospitals, or research laboratories. Throughout this course, students will focus on learning about the healthcare system and employment opportunities at a variety of entry levels; an overview of the healthcare delivery systems, healthcare teams, and legal and ethical considerations; and obtaining the knowledge, skills, and attitudes essential for providing basic care in veterinary clinics, hospitals, and other related locations. Additionally, students will learn essential job-related skills that include; monitoring and caring for animals before and after surgery; maintaining and sterilizing surgical instruments; cleaning and disinfecting kennels and operating rooms; providing emergency first aid to animals; giving medication to animals; appropriate techniques for collecting specimens and performing routine lab tests; and feeding and bathing animals. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from high school, to post-secondary opportunities, and to work in a variety of health science careers. Students are encouraged to focus on self-analysis to aid in their career selection. Job seeking and job maintenance skills,

personal management skills, and completion of the application process for admission into a post-secondary program are also areas of focus. Participation in HOSA or FFA encourages the development of leadership, communication, and career-related skills, and opportunities for community service.

Location	New Castle Career Center & Job Sites
Industry Certifications	<i>Vet Assistant Certificate</i>
Dual College Credits:	<i>AGR 107-Advanced Animal Science</i>

## **Welding**

I

7110 Principles of Welding Technology PRIN WEL TCH Principles of Welding Technology includes classroom and laboratory experiences that develop a variety of skills in oxy-fuel cutting and basic welding. This course is designed for individuals who intend to make a career as a Welder, Technician, Designer, Researcher, or Engineer. Emphasis is placed on safety at all times. OSHA standards and guidelines endorsed by the American Welding Society (AWS) are used. Instructional activities emphasize properties of metals, safety issues, blueprint reading, electrical principles, welding symbols, and mechanical drawing through projects and exercises that teach students how to weld and be prepared for postsecondary and career success.

7111 Shielded Metal Arc Welding SHLD MAW Shielded Metal Arc Welding involves the theory and application of the Shielded Metal Arc Welding process. Process theory will include basic electricity, power sources, electrode selection, and all aspects pertaining to equipment operation and maintenance. Laboratory welds will be performed in basic weld joints with a variety of electrodes in the flat, horizontal and vertical positions. Emphasis will be placed on developing the basic skills necessary to comply with AWS industry standards.

7101 Gas Welding Processes GAS WEL PRC Gas Welding Processes is designed to cover the operation of Gas Metal Arc Welding (MIG) equipment. This will include all settings, adjustments, and maintenance needed to weld with a wire feed system. Instruction on both short-arc and spray-arc transfer methods will be covered. Tee, lap, and open groove joints will be done in all positions with solid, flux core, and aluminum wire. Test plates will be made for progress evaluation. Schools may choose to offer the course as a comprehensive MIG Welding course or a combination of introductory MIG and TIG Welding operations.

Location	New Castle Career Center
Industry Certification:	<i>OSHA</i>
Dual College Credits:	<i>WELD 100-Welding Fundamentals</i>
	<i>WELD 108-Shielded Metal Arc Welding I</i>
	<i>WELD 206-Advanced Shielded Metal Arc Welding II</i>
	<i>WELD 203-Pipe Welding I</i>

**Welding**  
**II**

7226 Welding Technology Capstone WELD TECH CAP The Welding Technology Capstone course builds upon the knowledge and skills developed in Welding Fundamentals, Shielded Metal Arc Welding, and Gas Metal Arc Welding by developing advanced welding skills in Gas Tungsten Arc Welding (TIG), Pipe Welding, and Fabrication. As a capstone course, students should have the opportunity to apply their knowledge and use skills through an intensive work-based learning experience.

Location	New Castle Career Center
Industry Certification:	<i>AWS Ivy Tech Welding &amp; Technical Welding Certificate</i>
Dual College Credits:	<i>WELD 207-Gas Metal Arc (MIG) Welding</i>
	<i>WELD 272-Advanced Gas Metal Arc (MIG) Welding</i>
	<i>WELD 210-Welding Fabrication I</i>
	<i>WELD 208-Gas Tungsten Arc (TIG) Welding</i>
	<i>WELD 273-Advanced Gas Tungsten Arc (TIG) Welding</i>
	<i>IVY T Y 111</i>