



Hamilton Southeastern Schools – Ivy Tech Community College Technical Education Partnership

Students enrolled in one of these programs will complete 4 college technical education courses, earning 12-13 college credits. The courses will also receive high school credit. The college courses will count toward the Core 40 and Academic Honors diploma requirements. Students will also have the opportunity to pass high skill/high wage/high demand industry certification assessments upon completion of the program.

- Classes will be held from 12:15-2:15 on the Ivy Tech Noblesville campus on Tuesdays, Wednesdays, Thursdays, and Fridays. Mondays will be independent project work time for students.
- Bus transportation will be available for students to and from the Ivy Tech Noblesville campus.
- Seniors will receive first priority for spots, but juniors will be given consideration if spaces are available.
- The costs for the textbooks and exams for the programs will be covered by scholarship money for 2018-2019, so there will be no additional costs for the student.
- There is no tuition cost for the Ivy Tech credits or program enrollment for students.
- Students must take all 4 courses within each program.

The programs available are:

- Informatics & Cyber Security
- Building Construction Technology
- Visual Communications & Web Development
- Automotive Technology

More specific information on each program is on the following pages.



Informatics & Cyber Security

Students will take 4 courses that will prepare them for careers in the fields of computing & informatics. This program will prepare students for the workforce or to continue toward a 4-year degree in this field. Students will have the opportunity to earn industry certifications in CompTIA A+ certification exam. This program will help student focus in on which area of computing (hardware or software) will be of interest and better target future plans. A more common path would be to transfer to IUPUI or another 4-year program.

High School Course #	High School Course Title	Ivy Tech Course #	Ivy Tech Course Title
5251	Computer Science II: Informatics	INFM 109	Informatics Fundamentals
5230	Computer Tech Support	ITSP 135	Hardware/Software Support
5236	Computer Science II: Programming	SDEV 120	Computing Logic
5252	Comp Science II: Special Topics	CSIA 105	Intro to Cyber Security

- Informatics Fundamentals introduces the student to terminology, concepts, theory, and fundamental skills used to implement information system. Topics include the trends in computing, operating systems, security, and cloud implementations. A brief introduction to word processing and spreadsheets is included as part of a skill set that students will use throughout their careers in informatics.
- Hardware/Software Support delivers the necessary competencies with hands-on experience in the lab 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.
 - Industry Certification: CompTIA A+ 1 & 2
- Computing Logic introduces the student to algorithms, logic development and flowcharting as tools used to document computer logic. Students will study math concepts and the importance to computer development. Included areas of study are base numbering systems, truth tables, logic and relational operators. Other concepts covered are order of precedence, decision trees, security, different types of language approaches, and scripting. Students will practice skills such as listening, team building, work ethic, communications, documentation, and adaptability. Concepts will be demonstrated using basic scripting and simple programming code.
- Introduction to Cyber Security explores 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.
 - Industry Certification: CompTIA Security+



Building Construction Technology

Students will take 4 courses that will prepare them for careers in the fields of construction technology. This program will prepare students for the workforce or to continue toward a specialist's certificate, technical certificate or associate's degree in this field. Students will have the opportunity to earn industry certifications through the National Center for Construction Education & Research {NCCER}. Students who complete this program will be able to go to a contractor and start doing actual work. Approximately 50% of this program will be classroom time and 50% will be spent in the lab.

High School Course #	High School Course Title	Ivy Tech Course #	Ivy Tech Course Title
5580	Construction Trades I	BCTI 100	Intro to Construction Technology
5580	Construction Trades I	BCTI 101	Intro to Carpentry, part 1
5578	Construction Trades II	BCTI 102	Intro to Carpentry, part 2
5578	Construction Trades II	BCTI 103	Carpentry Frame/Finish, part 1

- Intro to Construction Technology covers the NCCER Core Curriculum and is a prerequisite to most other construction courses. Its modules cover topics such as basic safety, communication skills, and introduction to construction drawings; all basic skills needed to continue education in the construction program.
 - Industry Certification: NCCER Core Curriculum
- Intro to Carpentry, part 1 covers the first half of NCCER Carpentry Level I. Its modules cover topics such as building materials, fasteners, adhesives, hand and power tools, introduction to construction drawings, specifications, layout, and floor systems.
- Intro to Carpentry, part 2 This course covers the second half of NCCER Carpentry Level I. Its modules cover topics such as wall systems, ceiling joist and roof framing, basic stair layout, and introduction to building envelope systems. The NCCER Carpentry Level I certificate and wallet card will also be awarded upon successful completion of this course.
 - Industry Certification: NCCER Carpentry Level 1
- Carpentry Framing and Finishing, part 1 covers the first half of NCCER Carpentry Framing and Finishing Level 2. Its modules cover topics such as commercial drawings, roofing applications, thermal and moisture protection, exterior finishing, and cold-formed steel framing. The NCCER Carpentry Framing and Finishing Level 2 certificate and wallet card will not be awarded until the student successfully completes both this course and BCTI 104.



Visual Communications & Web Development

Students will take 4 courses that will prepare them for careers in the fields of visual communications. This could include those students interested in computer graphics, marketing, and digital design. This program will prepare students for the workforce or to continue toward a technical certificate or associate’s degree in this field. Completion of this program could take a student into an entry-level job from these courses. A more common path would be to transfer to IUPUI or another 4-year program.

High School	High School	Ivy Tech	Ivy Tech
<u>Course #</u>	<u>Course Title</u>	<u>Course #</u>	<u>Course Title</u>
5550	Graphic Layout & Design	VISC 102	Fundamentals of Imaging
5232	Interactive Media	VISC 105	Video and Sound
5572	Graphic Imaging Tech	VISC 115	Intro to Computer Graphics
5550	Graphic Layout & Design	VISC 116	Electronic Illustration

- Fundamentals of Imaging Introduces students 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. Explores composition and fosters creativity.
- Video and Sound An introduction to the field of video technology. Students will learn the basics of planning, shooting, editing and post-producing video and sound. Projects include exercises in technical and creative skills application, equipment usage and production techniques.
- Intro to Computer Graphics introduces students to fundamental computer graphics in visual communications. The initial focus of the course is on basic computer terminology and use, mastering fundamental skills, and developing efficient working styles. These skills are further developed through work with vector-based and page layout software used in the professional visual communications industry.
- Electronic Illustration provides intermediate instruction in illustration techniques using computer software designed for creating illustrations, technical, drawing, logos, packaging, maps, charts, and graphs. Emphasis is on preparing effective, creative illustrations for various media applications in an efficient, productive manner. Produces samples for student portfolios.



Automotive Technology

The Automotive Technology program offers exciting careers and unlimited opportunities. Through the use of equipment used in the automotive industry today and ASE master certified instructors, students learn how to diagnose and repair today's high-tech vehicles. This program will prepare students for entry level employment with companies that require training in areas such as: electrical systems, engine performance, transmissions, brakes, steering and suspension systems, air conditioning systems, and engine repair. Students are prepared to take industry standard certification exams from ASE.

Students receive hands-on experience on up to date repair and diagnostic equipment that is currently used in the automotive field today. Computer usage and skills along with network communication diagnosis has become critical skills required to quickly and accurately diagnosis newer automobiles, hybrid and alternative fueled vehicles, and heavy diesel trucks. This is a hands-on training program that allows plenty of lab time to develop the skills needed to be successful in whichever emphasis of study the student chooses to go into. Through your choice of electives, you can choose the emphasis of study you would like to pursue.

AUTI 100 Basic Automotive Service This course gives students an overview of the operating and general maintenance systems of the modern automobile. Students will be introduced to the safety and operation of equipment and tools used in the automotive industry. Students will study the maintenance and light repair of automotive systems. In addition, this course will prepare students to take a nationally recognized certification exam

AUTI 111 Electrical and Electronic This course gives students an overview of the electrical operating systems of the modern automobile. Students will be introduced to the safety and operation of equipment and tools used in the electrical diagnosis and repair in the automotive electrical industry. Students will study the fundamentals of electricity and automotive electronics. In addition, this course will prepare students to take a nationally recognized certification exam.

AUTI 121 Brake Systems This course teaches theory, service and repair of automotive braking systems. This course provides an overview of various mechanical brake systems used on today's automobiles. This course will emphasize professional diagnosis and repair methods for brake systems.

AUTI 141 Engine Fundamentals and Repair The course will utilize precision measuring tools, specialized tools and equipment, and emphasize following prescribed procedures needed to properly repair today's modern engine. This course also presents engine theory and operation and studies the various engine designs utilized today. In addition, this course will prepare students to take a nationally recognized certification exam.