



# Career Academy High School

Course Guide

## CAREER ACADEMY COURSE GUIDE

Every student at Career Academy shall have equal educational opportunities regardless of race, color, creed, sex, marital status, national origin or handicap.

Each student has available the services of a qualified counselor who has information regarding his/her assigned students. This information enables the counselor to better assist the student regarding aspects of the educational program. We hope that both students and parents will make use of this service. Telephone calls should be directed to the Guidance Office at the school.

### **GUIDANCE OFFICE**

Hours: 8:00 A.M. – 4:00 P.M.

### **GUIDANCE COUNSELORS**

Lea Ann Solberg Ext. 1146

[lsolberg@careeracademysb.com](mailto:lsolberg@careeracademysb.com)

Jorell Turner Ext. 1622

[jturner@careeracademysb.com](mailto:jturner@careeracademysb.com)

**Career Academy South Bend**

**574-299-9800**

### TABLE OF CONTENTS

2	About Registration and Use of This Guide
3	Graduation Bucket Requirement
3	Diploma Requirements
4	Honors and Technical Honors Requirements
5	College Core Prep Requirements
6	Pathway Requirements
6	Schedule Change Policy
7	Four Year Plan
8	Early College Information
9	Description of Courses
10	English
16	Mathematics
20	Science
24	Social Studies
27	PE/Health
30	World Language
31	General Electives
37	Fine Arts
42	Pathway classes for Class of 2025+
50	Pathway classes for Classes 2022-2024

## **CAREER ACADEMY REGISTRATION AND COURSE DESCRIPTION GUIDE**

We hope that this guide will help you and your parents plan your class schedule while at Career Academy. At the critical decision points in your high school career, you should review your college and career goals with your counselor and thoughtfully develop a program of study that will help you achieve these goals.

Graduation requirements are designed to give you a balanced program, which will help you develop the skills and understanding necessary to become a well-educated person. A four-year course of study will include a combination of core subjects and a wide range of electives. These, if wisely selected, will help you explore and develop your own interests and abilities.

**ALTHOUGH YOUR PARENTS AND COUNSELOR WISH TO HELP YOU IN PLANNING YOUR HIGH SCHOOL CURRICULUM, THE RESPONSIBILITY FOR THIS PLANNING RESTS WITH YOU:**

You should consider the following:

1. Know what the graduation requirements are and what diploma type you are working towards. Are you meeting these requirements in your planning?
2. What are college entrance or career technical requirements?
3. See your counselor if you need more information about credits for graduation or college entrance. Plan ahead – not for just next year, but for your entire high school career.
4. Before selecting a subject, check the course description to be sure it fits your needs, interests and abilities – and that you have completed the prerequisite course work necessary for enrollment.
5. You must have teacher approval for some courses. Check carefully.
6. When completing your course request, be sure you have made selections for all eight periods and indicated alternative options.

In this booklet we have provided you with a four-year planning form. You may find this helpful in preparing your course of study while in high school.

**GRADUATION REQUIREMENTS for 2023 and beyond.**

Any student graduating after 2022 must complete at least one requirement from all three buckets to fulfill graduation requirements:

**BUCKET 1:** High School Diploma

- **Diploma:** Get all required credits for selected diploma (as listed below).

**BUCKET 2:** Learn and Demonstrate Employability Skills

- **Project-Based Learning Experience:** Must complete one of the following:
  - Completion of a Pathway Capstone course, research project or approved PBL
- **Service-Based Learning Experience:** Must complete one of the following:
  - Volunteer hours, Peer Tutor, Band, Sports team, Robotics, NHS, Student Counsel, Community service, Yearbook, or other approved SBL
- **Work-Based Learning Experience:** Must complete one of the following:
  - Completion of capstone course, Internship, after school job, JAG, ROTC

**BUCKET 3:** Postsecondary Ready Competencies

- **Must complete one of the following:**
  - One complete pathway with a C average (see below) Academic or Technical Diploma addition, Benchmark scores on SAT or ACT, Pass ASVAB, Approved certification or credential, 3 transcribed dual credit courses

INDIANA <b>CORE40</b>	
English/ Language Arts	8 credits
	<b>Including a balance of literature, composition and speech.</b>
Mathematics	<b>6 credits (in grades 9-12)</b>
	2 credits: Algebra I 2 credits: Geometry 2 credits: Algebra II <i>Or complete Integrated Math I, II, and III for 6 credits.</i> <i>Students must take a math or quantitative reasoning course each year in high school</i>
Science	<b>6 credits</b>
	2 credits: Biology I 2 credits: Chemistry I or Physics I or Integrated Chemistry-Physic 2 credits: any Core 40 science course
Social Studies	<b>6 credits</b>

	<b>2 credits: U.S. History</b> <b>1 credit: U.S. Government</b> <b>1 credit: Economics</b> <b>2 credits: World History/Civilization or Geography/History of the World</b>
<b>Directed Electives</b>	<b>5 credits</b>  <b>World Languages</b> <b>Fine Arts</b> <b>Perkins 5 or NLPS Career and Technical Education Pathway</b>
<b>Physical Education</b>	<b>2 credits</b>
<b>Health and Wellness</b>	<b>1 credit</b>
<b>Electives*</b>	<b>6 credits</b>  <b>(College and Career Pathway courses recommended)</b>

## Academic Honors Addition

**For the Core 40 with Academic Honors diploma, students must:**

- Complete all requirements for Core 40.
- Earn 2 additional Core 40 math credits.
- Earn 6-8 Core 40 world language credits (6 credits in one language or 4 credits each in two languages).
- Earn 2 Core 40 fine arts credits.
- Earn a grade of a “C” or better in courses that will count toward the diploma.
- Have a grade point average of a “B” or better.
- Complete one of the following:
  - A. Earn 4 credits in 2 or more AP courses and take corresponding AP exams
  - B. Earn 6 verifiable transcript college credits in dual credit courses from the approved dual credit list.
  - C. Earn two of the following:
    1. A minimum of 3 verifiable transcript college credits from the approved dual credit list,
    2. 2 credits in AP courses and corresponding AP exams,
    3. 2 credits in IB standard level courses and corresponding IB exams.
  - D. Earn a combined score of 1750 or higher on the SAT critical reading, mathematics and writing sections and a minimum score of 530 on each
  - E. Earn an ACT composite score of 26 or higher and complete written section
  - F. Earn 4 credits in IB courses and take corresponding IB exams.

## Technical Honors Addition

**For the Core 40 with Technical Honors diploma, students must:**

- Complete all requirements for Core 40.
- Earn 6 credits in the college and career preparation courses in a state-approved College & Career Pathway and one of the following:
  1. State approved, industry recognized certification or credential, or
  2. Pathway dual credits from the approved dual credit list resulting in 6 transcript college credits
- Earn a grade of “C” or better in courses that will count toward the diploma.
- Have a grade point average of a “B” or better.
- Complete one of the following,
  - A. Any one of the options (A - F) of the Core 40 with Academic Honors
  - B. Earn the following scores or higher on WorkKeys; Reading for Information – Level 6, Applied Mathematics – Level 6, and Locating Information-Level 5.
  - C. Earn the following minimum score(s) on Accuplacer: Writing 80, Reading 90, Math 75.
  - D. Earn the following minimum score(s) on Compass; Algebra 66, Writing 70, Reading 80.

**College Core Prep Certification**...Your first year of college completed while in high school.

Must choose at least one from each category and must equal 30 credits or more.

**Humanistic Ways of Knowing**

Engl 206 Intro to Literature (3)

Engl 202 Creative Writing (3)

**Soc/Behav Ways of Knowing**

Hist 101 Survey of Amer History I (3)

Hist 102 Survey of Amer Hisory II (3)

Pols 101 Intro to AmerGov/Politics (3)

**Scien Ways of Knowing**

Biol 101 Intro to Biology (3)

Biol 105 Biology I Molecular and Cellular Processes (5)

Biol107 Biology II Diversity of Life (5)

Chem 101 Intro to Chemistry (4)

**Quantatative Reasoning**

College Algebra (3)

Trigonometry (3)

Calculus (3)

**Written Communication**

Engl 111 Composition (3)

Engl 215 Rhetoric/Argum (3)

**Speak/Listening**

Comm 101 Intro to Comm (3)

**DUAL CREDIT COURSES-College Core Prep classes**

Career Academy offers academic dual credit courses, which are college level courses that students can enroll in to earn both high school and college credit. Dual Credit classes are taken at the high school. With a passing grade of a “C” or higher a student is awarded high school and college credit.

Successful completion of college-level courses helps students with a successful transition to a college campus and helps students acquire the confidence to succeed both academically and personally in college.

**PATHWAYS required for graduation. Must pass at least one complete pathway with a C average or better.**

**2023-2024 Graduates**

	Level A Class	Level B Class
<b>Business/Entrepreneur:</b>	Principles of Business (4562)	Office and Administration Business (5268)
<b>Health Sciences:</b>	Health Science I (5282)	Health Science II: CNA Prep (5284)
	Health Science I (5282)	Health Science II: MA Prep (6138)
<b>Information Tech (IT):</b>	Computer Science I (4801)	Computer Science II (5236)
<b>Precision Machining:</b>	Precision Machining I (5782)	Precision Machining II (5784)
<b>Engineering:</b>	Principles of Engineering (5644)	Comp Integrated Manufacturing (5534)
<b>Welding:</b>	Welding Technology I (5776)	Welding Technology II (5778)

**2025-BEYOND Graduates**

	Principles	CTE Concentrator	CTE Concentrator B
<b>Business/Entrepreneur:</b>	Prin of Entrep (7154)	New Venture Devel (7148)	Small Bus Operations (7147)
<b>Health Sciences:</b>	Prin of HealthCare (7168)	Med Term (5274)	HealthCare Spec: CNA (7166)
	Prin of HealthCare (7168)	Med Term (5274)	HealthCare Spec: CMA (7164)
<b>Information Tech (IT):</b>	Prin of Computing (7183)	Website Data/Dev (7185)	Software Develop (7184)
<b>Precision Machining:</b>	Prin of Prec Mach (7109)	Prec Mach Fund(7105)	Adv Prec Mach (7107)
<b>Engineering:</b>	Intro to Engin/Desn (4802)	Princ of Engin (5644)	Comp Integ Manuf (5534)
<b>Welding:</b>	Prin of Weld Tech (7110)	Shielded Metal Arc (7111)	Gas Welding Proc (7101)

**SCHEDULE CHANGE POLICY: Final schedules will be available early August. If a schedule needs to be changed an appointment must be made BEFORE the start of school. Because students choose their classes, schedule changes will only be made if one of the following four conditions applies:**

1. Student needs a higher level class because of a college or technical school requirement.
2. Student has an error on his/her schedule.
3. Student needs to make up a class because of a failure or required credit.
4. Student passed the course in summer school, and the schedule needs to be adjusted.

**Scheduling determines staffing needs. Therefore, NO schedule changes after the first ten days of a semester.**

**Please note that ALL students must have at least 6 classes during their senior year; this can include internships.**

# FOUR-YEAR PLAN WORKSHEET

This four-year plan sheet is intended as a blueprint for your high school success. We encourage you to enlist the aid of your parents in selecting courses that will meet your educational career plans. The plan sheet can be revised at any time and will provide an overall view of your academic goals.

WHAT ARE YOUR FUTURE PLANS?	
Apprenticeship	2 Year College
Military	4 Year College
Trade School	

CAREER CLUSTER		
Health Sc	Welding	Machining Engineering
Business	Computer Science	

9 <sup>th</sup> Grade	
1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

10 <sup>th</sup> Grade	
1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

11 <sup>th</sup> Grade	
1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

12 <sup>th</sup> Grade	
1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____



# **Early College Program**

## **Early College develops a unique vision and learning environment that represents community interest and student needs.**

- Students have the opportunity to earn transferrable college credit while still in high school.
- Mastery and competence are rewarded with enrollment in college-level courses and the opportunity to earn college credits for free
- The years to a post-secondary degree are compressed.
- Middle school 8<sup>th</sup> graders are included in the early college to promote academic preparation and awareness of the early college option.
- Provide academic and social supports that help students succeed in a challenging course of study.
- Learning takes place in small, personalized learning environments that demand rigorous high – quality work and provide extensive support.
- The physical transition between high school and college is a much smoother transition because students are able to apply to colleges and receive assistance with filling out financial aid forms during the last year of high school.

## **Admission recommendations Career Academy Early College:**

- Application forms for students on track to be promoted to the next grade level
- Student is the first generation in their family to attend college
- Student is an English Language Learner
- Student demonstrates characteristics to function in a rigorous learning environment
- Student is representative of underrepresented population in post-secondary education institution
- Student is required to have 11 credits or more at the end of 9<sup>th</sup> grade
- Student to meet or exceed 95% attendance
- Student has demonstrated positive behaviors conducive for the university environment

## **The application process will consist of the following:**

1. Career Academy Early College Application
  - a. Completed by parent or guardian
2. Career Academy Early College Student Recommendation
  - a. Completed by student
  - b. Completed by (2) teachers
3. Career Academy Early College Parent/Guardian Support Agreement
4. Career Academy Early College Student Agreement

**Course Descriptions**  
**Please be sure to look**  
**at grade level**  
**recommendations and**  
**prerequisites!**



## Academic Classes

Look for the following symbols:

- **C40** required class for **Core 40 Diploma**
- **AHD** required class for **Academic Honors**
- **CCP** required class for the **College Core Prep**

## English/Language Arts

### **1002 English 9 C40**

### **1002EC English 9 C40**

(ENG 9)

English 9, an integrated English course based on the Indiana Academic Standards for English/Language Arts in Grades 9-10, is a study of language, literature, composition, and oral communication, focusing on literature within an appropriate level of complexity for this grade band. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance in classic and contemporary literature balanced with nonfiction. Students write responses to literature, expository (informative), narrative, and argumentative/persuasive compositions, and sustained research assignments. Students deliver grade-appropriate oral presentations with attention to audience and purpose and access, analyze, and evaluate online information.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

### **1002 Applied English 9**

(ENG 9)

Applied English 9 is an integrated English course based on the Indiana Content Connectors for English/Language Arts in Grades 9-10, is a study of language, literature, composition, and communication, focusing on literature and nonfiction within an appropriate level of complexity for each individual student. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to a variety of texts. Students form responses to literature, expository (informative), narrative, and argumentative/persuasive compositions, and research tasks when appropriate. Students deliver ability-appropriate presentations with attention to audience and purpose and access, analyze, and evaluate online information.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 4 units maximum
- Counts as an English/Language Arts Requirement for the Certificate of Completion

### **1004 English 10 C40**

#### **1004EC English 10 C40**

(ENG 10)

English 10, an integrated English course based on the Indiana Academic Standards for English/Language Arts in Grades 9- 10, is a study of language, literature, composition, and oral communication, focusing on literature with an appropriate level of complexity for this grade band. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance in classic and contemporary literature balanced with nonfiction. Students write responses to literature, expository (informative) and argumentative/persuasive compositions, and sustained research assignments. Students deliver grade-appropriate oral presentations with attention to audience and purpose and access, analyze, and evaluate online information.

- Required Prerequisites: none
- Recommended Prerequisites: English 9 or teacher recommendation
- Credits: 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

### **1004 Applied English 10**

(ENG 10)

Applied English 10 an integrated English course based on the Indiana Content Connectors for English/Language Arts in Grades 9-10, is a study of language, literature, composition, and communication, focusing on literature and nonfiction within an appropriate level of complexity for each individual student. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to a variety of texts. Students form responses to literature, expository (informative), narrative, and argumentative/persuasive compositions, and research tasks when appropriate. Students deliver ability appropriate presentations with attention to audience and purpose and access, analyze, and evaluate online information.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied units: 4 units maximum
- Counts as an English/Language Arts Requirement for the Certificate of Completion

### **1006 English 11 C40**

(ENG 11)

English 11, an integrated English course based on the Indiana Academic Standards for English/Language Arts in Grades 11-12, is a study of language, literature, composition, and oral communication focusing on literature with an appropriate level of complexity for this grade band. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance appropriate in classic and contemporary literature balanced with nonfiction. Students write narratives, responses to literature, academic essays (e.g. analytical, persuasive, expository, summary), and more sustained research assignments incorporating visual information in the form of pictures, graphs, charts and tables. Students write and deliver grade-appropriate multimedia

presentations and access, analyze, and evaluate online information.

- Required Prerequisites: none
- Recommended Prerequisites: English 9 and English 10 or teacher recommendation
- Credits: 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

### **1006 Applied English 11**

(ENG 11)

Applied English 11, an integrated English course based on the Indiana Content Connectors English/Language Arts in Grades 9-10 and applicable employability skills. This course is a study of language, literature, composition, and communication focusing on literature with an appropriate level of complexity for each individual student. Students analyze, compare and evaluate a variety of classic and contemporary literature and nonfiction texts, including those of historical or cultural significance. Students write narratives, responses to literature, academic responses (e.g. analytical, persuasive, expository, summary), and research tasks when appropriate. Students analyze and create visual information in the form of pictures, graphs, charts, and tables. Students write and deliver grade appropriate multimedia presentations and access online information.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied units: 4 units maximum
- Counts as an English/Language Arts Requirement for the Certificate of Completion

### **1008 English 12 C40**

(ENG 12)

English 12, an integrated English course based on the Indiana Academic Standards for English/Language Arts for Grades 11- 12, is a study of language, literature, composition, and oral communication focusing on an exploration of point of view or perspective across a wide variety of genres. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance in classic and contemporary literature balanced with nonfiction. Students write narratives, responses to literature, academic essays (e.g. analytical, persuasive, expository, summary), and more sustained research assignments incorporating visual information in the form of pictures, graphs, charts, and tables. Students write and deliver grade-appropriate multimedia presentations and access, analyze, and evaluate online information.

- Required Prerequisites: none
- Recommended Prerequisites: English 9, English 10, and English 11 or teacher recommendation
- Credits: 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

## **1008 Applied English 12**

(ENG 12)

Applied English 12, an integrated English course based on the Indiana Content Connectors English/Language Arts in Grades 9-10 and applicable employability skills. This course is a study of language, literature, composition, and communication focusing on literature with an appropriate level of complexity for each individual student. Students analyze, compare, and evaluate a variety of classic and contemporary literature and nonfiction texts, including those of historical or cultural significance. Students write narratives, responses to literature, academic responses (e.g. analytical, persuasive, expository, summary), and research tasks when appropriate. Students analyze and create visual information in the form of pictures, graphs, charts, and tables. Students write and deliver grade appropriate multimedia presentations and access online information.

- Required Prerequisites: none
- Recommended Prerequisites:
- Applied units: 4 units maximum
- Counts as an English/Language Arts Requirement for the Certificate of Completion
- Course may be used for students in 18-22 year-old programming.

## **ENGL 111: Composition I CCP**

(COMP) (DUAL CREDIT. REPLACES ENG 11 OR 12)

Composition I, a course based on the Indiana Academic Standards for English/ Language Arts, is a study and application of the various types of informational writing intended for a variety of different audiences. Using the writing process, students demonstrate a command of vocabulary, English language conventions, research and organizational skills, an awareness of the audience, the purpose for writing, and style. Course can be offered in conjunction with a literature course, or schools may embed Indiana Academic Standards for English/Language Arts reading standards within curriculum.

- Required Prerequisites: 2.6 GPA or Knowledge Assessment English 70
- Recommended Prerequisites: English 9, English 10, or teacher recommendation
- Credits: 1 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

## **ENGL 206 Intro to Literature: CCP**

(INTRO LIT) (DUAL CREDIT. REPLACES ENG 11 OR 12)

Intro to Literature, a course based on the Indiana Academic Standards for English/Language Arts, is a study of representative works and authors of the United States. Students read, analyze, evaluate, critique, and actively respond to a wide variety of literary genres that reflect American culture, including quality works of various ethnic and cultural minorities. Students compare readings and media from literature, history, and other subjects by demonstrating how the ideas and concepts presented in the works are interconnected, distinctly American, and important to an understanding of the development of the current culture. Course can be offered in conjunction with a composition course, or schools may embed Indiana Academic Standards for English/Language Arts writing standards within American Literature curriculum.

- Required Prerequisites: ENGL 111

- Recommended Prerequisites: English 9, English 10, or teacher recommendation
- Credits: 1 to 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

**COMM 101 Speech and Communication: CCP**

(ADV SPEECH) (DUAL CREDIT. REPLACES ENG 11 OR 12)

Advanced Speech and Communication, a course based on the Indiana Academic Standards for English/Language Arts and emphasizing the High School Speech and Communication Standards, is the study and application of skills in listening, oral interpretation, media communications, research methods, and oral debate. Students deliver different types of oral and multimedia presentations, including speeches to inform, to motivate, to entertain, and to persuade through the use of impromptu, extemporaneous, memorized, or manuscript delivery.

- Required Prerequisites: 2.6 GPA or Knowledge Assessment English 70
- Recommended Prerequisites: Speech or teacher recommendation
- Credits: 1 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diploma

**ENGL 215 Rhetoric and Argumentation: CCP**

(RHET/ARG) (DUAL CREDIT. REPLACES ENG 11 OR 12)

Rhetoric and Argumentation, a course based on the Indiana Academic Standards for English/Language Arts, is a study of deductive and inductive logic, including logical fallacies, and should challenge students to think critically, analytically, and philosophically. Students learn to formulate thoughtful inquiry questions, connect ideas or concepts, challenge ideas and concepts, and rephrase ideas when appropriate. Active class participation is essential, including persistent questioning, rational discussion, and reasoned argumentation. Students make comments that reflect the development of logic (a line of reasoning), represent a clear point of view, and involve evidence of support (data, examples, anecdotes, documents, information from a variety of sources). Students use the same Standard English conventions for oral speech that they use in their writing.

- Required Prerequisites: ENGL 111
- Recommended Prerequisites: English 9, English 10 or teacher recommendation
- Credits: 1 or 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

**1090 Applied Composition**

(COMP)

Applied Composition, a course based on the Indiana Academic Standards or Content Connectors for English/Language Arts, is a study and application of the rhetorical writing strategies of narration, description, exposition, and persuasion. Using the writing process, students demonstrate a command of vocabulary, English language conventions, research and organizational skills, an awareness of the audience, the purpose for writing, and style.

- Required Prerequisites: none

- Recommended Prerequisites: none
- Applied Units: 2 units maximum
- Counts as an English/Language Arts Requirement or Elective for the Certificate of Completion

### **ENGL 202 Creative Writing: CCP**

(CREAT WRIT) (DUAL CREDIT. REPLACES ENG 11 OR 12)

Creative Writing, a course based on the Indiana Academic Standards for English/Language Arts, is a study and application of the rhetorical writing strategies for prose and poetry. Using the writing process, students demonstrate a command of vocabulary, the nuances of language and vocabulary, English language conventions, an awareness of the audience, the purposes for writing, and the style of their own writing. Course can be offered in conjunction with a literature course, or schools may embed Indiana Academic Standards for English/Language Arts reading standards within curriculum.

- Required Prerequisites: ENGL 111
- Recommended Prerequisites: English 9, English 10, or teacher recommendation
- Credits: 1 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

### **1010 Language Art Lab**

(LANG LAB)

Language Arts Lab is a supplemental course that provides students with individualized or small group instruction designed to support success in completing coursework aligned with the Indiana Academic Standards for English Language/Arts focusing on the writing standards. All students should be concurrently enrolled in an English course in which class work will address all of the Indiana Academic Standards.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 to 8 credits. This course allows for successive semesters of instruction for students who need additional support in any or all aspects of the writing standards.
- Counts as an Elective for all diplomas

### **1010 Applied Language Arts Lab**

(LANG LAB)

Applied Language Arts Lab is a supplemental course that provides students with individualized or small group instruction designed to support skills and content aligned to Indiana Academic Standards or Content Connectors for English/Language Arts. All students should be concurrently enrolled in an English course or have met the ELA requirements for the Certificate of Completion.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 4 units maximum
- Counts an Elective for the Certificate of Completion



## **Math**

### **2520 Algebra I C40**

### **2520EC Algebra I C40**

(ALG I)

Algebra I formalizes and extends the mathematics students learned in the middle grades. Algebra I is made up of six strands: Real Numbers and Expressions; Functions; Linear Equations, Inequalities, and Functions; Systems of Equations and Inequalities; Quadratic and Exponential Equations and Functions; and Data Analysis and Statistics. These critical areas deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend. Students will also engage in methods for analyzing, solving, and using quadratic functions. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 1 credit per semester
- Counts as a Mathematics course for all diplomas
- Fulfills the Algebra I/Integrated Mathematics I requirement for all diplomas
- Students pursuing Core 40, Core 40 with Academics Honors, or Core 40 with Technical Honors diploma should receive credit for Algebra I by the end of Grade 9

### **Applied Algebra I**

(ALG I)

Applied Algebra I formalizes and extends the mathematics students learned in the middle grades. Algebra I is made up of five strands: Numbers Sense; Expressions and Computation; Linear Equations; Inequalities and Functions; Systems of Equations and Inequalities and Quadratic and Exponential Equations and Functions. The strands are further developed by focusing on the content of the Algebra content connectors.

- Required Prerequisites: None
- Recommended Prerequisites: None
- 4 units maximum
- Counts as a Math Requirement for the Certificate of Completion

### **2516 Algebra I Lab**

### **2516EC Algebra I Lab**

(ALG I LAB)

Algebra I Lab is a mathematics support course for Algebra I. Algebra I Lab is taken while students are concurrently enrolled in Algebra I. This course provides students with additional time to build the foundations necessary for high school math courses, while concurrently having access to rigorous, grade level appropriate courses. The five critical areas of Algebra I Lab align with the critical areas of Algebra I: Relationships between Quantities and Reasoning with Equations; Linear and Exponential Relationships;

Descriptive Statistics; Expressions and Equations; and Quadratic Functions and Modeling. However, whereas Algebra I contains exclusively grade-level content, Algebra I Lab combines standards from high school courses with foundational standards from the middle grades.

- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 1 credit per semester
- Counts as a Mathematics course for the General Diploma only or as an elective for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- Algebra I Lab is designed as a support course for Algebra I. As such, a student taking Algebra I Lab must also be enrolled in Algebra I during the same academic year.

### **Applied Algebra I Lab**

(ALG I LAB)

Applied Algebra I Lab is a mathematics support course. Algebra I Lab should be taken while students are concurrently enrolled in a math course or have met the math requirements for the certificate of completion. This course provides students with additional time to build the foundations necessary for high school math courses and work on specific, individualized math skills, while concurrently having access to rigorous, grade-level appropriate courses. The five critical areas align with the critical areas of Math: Number Sense; Computation; Data Analysis; Geometry and Measurement; and Algebraic Thinking. Algebra I Lab combines standards from high school courses with foundational standards from the middle grades.

- Required Prerequisites: None
- Recommended Prerequisites: None
- 4 units maximum
- Counts as an Elective for the Certificate of Completion

### **2522 Algebra II C40**

#### **2522EC Algebra II C40**

(ALG II)

Algebra II builds on work with linear, quadratic, and exponential functions and allows for students to extend their repertoire of functions to include polynomial, rational, and radical functions. Students work closely with the expressions that define the functions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Algebra II is made up of seven strands: Complex Numbers and Expressions; Functions; Systems of Equations; Quadratic Equations and Functions; Exponential & Logarithmic Equations and Functions; Polynomial, Rational, and Other Equations and Functions; and Data Analysis, Statistics, and Probability. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

- Required Prerequisites: None
- Recommended Prerequisites: Algebra I

- 2 semester course, 1 credit per semester
- Counts as a Mathematics course for all diplomas
- Fulfills the Algebra II/Integrated Mathematics III requirement for all diplomas

### **2532 Geometry C40**

#### **2532EC Geometry C40**

(GEOM)

Geometry formalizes and extends students' geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Seven critical areas comprise the Geometry course: Logic and Proofs; Points, Lines, Angles, and Planes; Triangles; Quadrilaterals and Other Polygons; Circles; Transformations; and Three-dimensional Solids. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

- Required Prerequisites: None
- Recommended Prerequisites: Algebra I
- 2 semester course, 1 credit per semester
- Counts as a Mathematics course for all diplomas
- Fulfills the Geometry/Integrated Mathematics II requirement for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

### **2532 Applied Geometry**

(GEOM)

Applied Geometry formalizes and extends students' geometric experiences from the middle grades. These critical areas comprise the Geometry course: Points, Lines, Angles, and Planes; Triangles; Quadrilaterals and Other Polygons; Circles; Transformations; and Three-dimensional Solids. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

- Required Prerequisites: None
- Recommended Prerequisites: None
- 4 units maximum
- Counts as a Math Requirement for the Certificate of Completion

### **2564 COLLEGE ALGEBRA: CCP AHD**

(COLL ALG) (DUAL CREDIT. REPLACES Pre\_Cal)

College Algebra extends the foundations of algebra and functions developed in previous courses to new functions, including exponential and logarithmic functions, and to higher-level sequences and series. The course provides students with the skills and understandings that are necessary for advanced manipulation of angles and measurement. Pre-Calculus is made up of five strands: Polar Coordinates and Complex Numbers; Functions; Quadratic, Polynomial, and Rational Equations and Functions; Exponential

and Logarithmic Equations and Functions; and Parametric Equations. Students will also advance their understanding of imaginary numbers through an investigation of complex numbers and polar coordinates. The course is designed for students who expect math to be a major component of their future college and career experiences, and as such it is designed to provide students with strong foundations for calculus and other higher-level math courses. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

- Required Prerequisites: None
- Recommended Prerequisites: Algebra II and Geometry or Integrated Mathematics III
- 1 semester course, 1 credit per semester
- Counts as a Mathematics course for all diplomas

### **2566 Trigonometry: CCP AHD**

(TRIG) (DUAL CREDIT)

Trigonometry provides students with the skills and understandings that are necessary for advanced manipulation of angles and measurement. Trigonometry provides the foundation for common periodic functions that are encountered in many disciplines, including music, engineering, medicine, finance, and nearly all other STEM disciplines. Trigonometry consists of seven strands: conics, unit circle, geometry, periodic functions, identities, polar coordinates, and vectors. Students will also advance their understanding of imaginary numbers through an investigation of complex numbers and polar coordinates. A strong understanding of complex and imaginary numbers is a necessity for fields such as engineering and computer programming. The eight Process Standards for Mathematics apply throughout the course.

Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

- Required Prerequisites: None
- Recommended Prerequisites: Algebra II and Geometry or Integrated Mathematics III
- 1 semester course, 1 credit per semester
- Counts as a Mathematics course for all diplomas

### **2527 Calculus CCP**

(CALC) (DUAL CREDIT)

Calculus expands a student's knowledge of topics like functions, graphs, limits, derivatives, and integrals. Additionally, students will review algebra and functions, modeling, trigonometry, etc. Calculus is made up of five strands: Limits and Continuity; Differentiation; Applications of Derivatives; Integrals; and Applications of Integrals. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

- Required Prerequisites: None

- Recommended Prerequisites: Pre-Calculus and Trigonometry
- 2 semester course, 1 credit per semester
- Counts as a Mathematics course for all diplomas

## ***Science***

### **3024 Biology I (L) C40**

#### **3024EC Biology I (L) C40**

(BIO I)

Biology I is a course based on the following core topics: cellular structure and function, matter cycles and energy transfer; interdependence; inheritance and variation in traits; evolution. Instruction should focus on developing student understanding that scientific knowledge is gained from observation of natural phenomena and experimentation, by designing and conducting investigations guided by theory, and by evaluating and communicating the results of those investigations according to accepted procedures.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credit per semester
- Fulfills the Biology requirement for all diplomas

### **3024 Applied Biology I (L)**

(BIO I)

Applied Biology I is a course based on the following core topics: cellular chemistry, structure and reproduction; matter cycles and energy transfer; interdependence of organisms; molecular basis of heredity; genetics and evolution. Instruction should focus on developing student understanding that scientific knowledge is gained from observation of natural phenomena and experimentation, by designing and conducting investigations guided by theory, and by evaluating and communicating the results of those investigations according to accepted procedures.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 4 units maximum
- Counts as a Science Requirement for the Certificate of Completion

### **3064 Chemistry I (L) C40**

#### **3064EC Chemistry I (L) C40**

(CHEM I)

Chemistry I is a course based on the following core topics: properties and states of matter; atomic structure and the Periodic Table; bonding and molecular structure; reactions and stoichiometry; behavior of gases; thermochemistry; solutions; acids and bases. Students enrolled in Chemistry I compare, contrast, and synthesize useful models of the structure and properties of matter and the mechanisms of its interactions. Instruction should focus on developing student understanding that scientific knowledge is gained from observation of natural phenomena and experimentation, by designing and conducting investigations guided by theory, and by evaluating and communicating the results of those investigations

according to accepted procedures.

- Required Prerequisites: none
- Recommended Prerequisites: Algebra II (can be taken concurrently)
- Credits: 2 semester course, 1 credit per semester
- Fulfills a science (physical) course requirement for all diplomas
- Qualifies as a quantitative reasoning course

### **3066 Chemistry II (L) : CCP**

(CHEM II) (DUAL CREDIT)

Chemistry II is an extended laboratory, field, and literature investigations-based course. Students enrolled in Chemistry II examine the chemical reactions of matter in living and nonliving materials. Based on the unifying themes of chemistry and the application of physical and mathematical models of the interactions of matter, students use the methods of scientific inquiry to answer chemical questions and solve problems concerning personal needs and community issues related to chemistry.

- Required Prerequisites: none
- Recommended Prerequisites: Chemistry I & Algebra II
- Credits: 2 semester course, 1 credit per semester
- Counts as an Elective for all diplomas
- Fulfills a science course requirement for all diplomas
- Qualifies as a quantitative reasoning course

### **3044 Applied Earth and Space Science I (L)**

(EAS SCI I)

Applied Earth and Space Science I is a course focused on the following core topics: study of the earth's layers; atmosphere and hydrosphere; structure and scale of the universe; the solar system and earth processes. Students analyze and describe earth's interconnected systems and examine how earth's materials, landforms, and continents are modified across geological time. Instruction should focus on developing student understanding that scientific knowledge is gained from observation and experimentation, by conducting investigations, and evaluating and communicating the results of those investigations. This course may include a variety of learning experiences and tools to support the process of investigation, data collection, and analysis.

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 4 units maximum
- Counts as an Elective or Science Requirement for the Certificate of Completion

### **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 the 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.

- Required Prerequisites: Principles of the Biomedical Sciences
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a science requirement for all diplomas

### **5218 Principles of Biomedical Sciences**

(PRIN BIOMED)

Principles of Biomedical Sciences provides 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.

- Required Prerequisites: Biology I or concurrent enrollment in Biology I is required
- Recommended Prerequisites: none
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a science requirement for all diplomas

### **5276 Anatomy and Physiology**

(A & P) (Dual Credit)

Anatomy & Physiology is a course in which students investigate concepts related to Health Science, with emphasis on interdependence of systems and contributions of each system to the maintenance of a healthy body. It introduces students to the cell, which is the basic structural and functional unit of all organisms, and covers tissues, integument, skeletal, muscular and nervous systems as an integrated unit. Through instruction, including laboratory activities, students apply concepts associated with Human Anatomy & Physiology. Students will understand the structure, organization and function of the various components of the healthy body in order to apply this knowledge in all health-related fields.

- Required Prerequisites: none

- Recommended Prerequisites: Biology
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Core 40 Science course requirement for all diplomas

### **BIOL 101: Intro to College Biology CCP**

**(BIOL)** (DUAL CREDIT. Replaces 3024 BIO for Core 40)

Introduces the basic concepts of life. Includes discussion of cellular and organismal biology, evolution, ecology, and interaction among all living organisms. Addresses applications of biology in a global community.

- Required Prerequisites: 2.6 GPA Knowledge Assessment English 70
- Recommended Prerequisites: Biology
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Core 40 Science course requirement for all diplomas

### **BIOL 105: Biology I Molecular and Cellular Processes CCP**

**(BIOL)** (DUAL CREDIT)

Course presents an in-depth introduction to biology including the basic principles of biochemistry, concepts of cell structure, cell metabolism, and cellular respiration, processes of DNA replication and gene expression, principles of molecular and Mendelian genetics, concepts of Natural Selection in relation to evolution, and diversity of prokaryotes, protists, and green plants.

- Required Prerequisites: 2.6 GPA Knowledge Assessment English 70; Math 50
- Recommended Prerequisites: Biology
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Core 40 Science course requirement for all diplomas

### **BIOL 107: Biology II: Diversity of Life CCP**

**(BIOL)** (DUAL CREDIT)

Presents an in-depth introduction to biology including a survey of animal diversity, the fundamentals of plant and animal structure and function, principles of animal reproduction and development, and an overview of vertebrate anatomy, and cover-age of population, community. Systems ecology and behavioral ecology.

- Required Prerequisites: 2.6 GPA Knowledge Assessment English 70; Math 50
- Recommended Prerequisites: Biology
- Credits: 1 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Core 40 Science course requirement for all diplomas



## ***Social Studies***

### **1514 Economics C40**

(ECON)

Economics examines the allocation of resources and their uses for satisfying human needs and wants. The course analyzes economic reasoning and behaviors of consumers, producers, savers, investors, workers, voters, institutions, governments, and societies in making decisions. Students explain that because resources are limited, people must make choices and understand the role that supply, demand, prices, and profits play in a market economy. Key elements of the course include the study of scarcity and economic reasoning; supply and demand; market structures; the role of government; national economic performance; the role of financial institutions; economic stabilization; and trade.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester
- Counts as an Elective for all diplomas
- Fulfills the Economics requirement for the Core 40, Core 40 with Academic Honors, Core 40 with Technical Honors and International Baccalaureate diplomas
- Fulfills a Social Studies requirement for the General Diploma only
- Qualifies as a quantitative reasoning course

### **1514 Applied Economics**

(ECON)

Applied Economics examines the allocation of resources and their uses for satisfying human needs and wants. The course identifies economic behavior of consumers, producers, savers, investors, workers, voters, institutions, governments, and societies in making decisions. Students explain that because resources are limited, people must make choices and understand the role that supply, demand, prices, and profits play in a market economy. Key elements of the course include the study of scarcity and economic reasoning; supply and demand; market structures; the role of government; national economic performance; the role of financial institutions; economic stabilization; and trade. Students may be offered opportunities to better understand and apply course content through a variety of instructional strategies including project- and community-based instruction and real world experiences.

- Required Prerequisites: none
- Recommended Prerequisites:
- Applied Units: 2 units maximum
- Counts as a Social Studies Requirement or Elective for the Certificate of Completion

### **1540 United States Government: C40**

#### **POLS 101: Intro to Amer Gov and Politics (Dual Credit) CCP**

(US GOVT)

United States Government provides a framework for understanding the purposes, principles, and practices of constitutional representative democracy in the United States. Responsible and effective participation of citizens is stressed. Students understand the nature of citizenship, politics, and

governments and understand the rights and responsibilities of citizens and how these are part of local, state, and national government. Students examine how the United States Constitution protects the rights and provides the structure and functions of various levels of government. Analysis of how the United States interacts with other nations and the government's role in world affairs is included in this course. Using primary and secondary resources, students will articulate, evaluate, and defend positions on political issues. As a result, they will be able to explain the role of individuals and groups in government, politics, and civic activities and the need for civic and political engagement of citizens in the United States.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester
- Fulfills Government requirement for all diplomas
- Students are required to take the naturalization test for citizenship per SEA 132

### **1540 Applied United States Government**

(US GOVT)

Applied United States Government provides a framework for understanding the purposes, principles, and practices of constitutional representative democracy in the United States. Responsible and effective participation of citizens is stressed. Students understand the nature of citizenship, politics, and governments; the rights and responsibilities of citizens; and how these are part of local, state, and national government. Students examine how the United States Constitution protects the rights and provides the structure and functions of various levels of government. How the United States interacts with other nations and the government's role in world affairs will be included. Using primary and secondary resources, students will articulate, evaluate, and defend positions on political issues. As a result, they will recognize their own impact, the role of individuals and groups in government, politics, and civic activities and the need for civic and political engagement of citizens in the United States.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied units: 2 units maximum
- Counts as a social studies requirement or elective for the Certificate of Completion

### **1542 United States History: C40**

#### **HIST 101/102 Survey of American History (Dual Credit) CCP**

(US HIST)

United States History is a two-semester course that builds upon concepts developed in previous studies of U.S. History and emphasizes national development from the late nineteenth century into the twenty-first century. After reviewing fundamental themes in the early development of the nation, students are expected to identify and review significant events, persons, and movements in the early development of the nation. The course then gives major emphasis to the interaction of key events, people, and political, economic, social, and cultural influences in national developments from the late nineteenth century through the present as they relate to life in Indiana and the United States. Students are expected to trace and analyze chronological periods and examine the significant themes and concepts in U.S. History.

Students develop historical thinking and research skills and use primary and secondary sources to explore topical issues and to understand the cause for changes in the nation over time.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credit per semester
- Fulfills the US History requirement for all diplomas

### **1542 Applied United States History**

(US HIST)

Applied United States History is a course that builds upon concepts of U.S. History and emphasizes national development from the late nineteenth century into the twenty-first century. After reviewing fundamental themes in the early development of the nation, students identify and review significant events, persons, and movements in the early development of the nation. The course then gives major emphasis to the interaction of key events, people, and political, economic, social, and cultural influences in national developments from the late nineteenth century through the present as they relate to life in Indiana and the United States. Students trace and analyze chronological periods and examine the significant themes and concepts in U.S. History. Students develop historical thinking and research skills and use primary and secondary sources to explore topical issues and to understand specific topics or the cause for changes in the nation over time.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 4 units maximum
- Counts as a Social Studies Requirement or Elective for the Certificate of Completion

### **1548 World History and Civilization C40**

#### **1548EC World History and Civilization C40**

(WLD HST/CVL)

World History and Civilization emphasizes events and developments in the past that greatly affected large numbers of people across broad areas and that significantly influenced peoples and places in subsequent eras. Key events related to people and places as well as transcultural interaction and exchanges are examined in this course. Students are expected to compare and contrast events and developments involving diverse peoples and civilizations in different regions of the world. They will examine examples of continuity and change, universality and particularity, and unity and diversity among various peoples and cultures from the past to the present. Students are also expected to practice and process skills of historical thinking and research and apply content knowledge to the practice of thinking and inquiry skills and processes. There will be continuous and pervasive interactions of processes and content, skills and substance, in the teaching and learning of history.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credit per semester
- Counts as an elective for all diplomas
- Fulfills the Geography History of the World/World History and Civilization graduation

requirement for all diplomas

### **1570 Applied Geography and History of the World**

(GEO-HST WLD)

Applied Geography and History of the World is designed to enable students to use geographical tools, skills and historical concepts to apply their understanding of major global themes including the origin and spread of world religions; exploration; conquest, and imperialism; urbanization; and innovations and revolutions. Geographical and historical skills include forming research questions, acquiring information by investigating a variety sources, organizing information by creating graphic representations, analyzing information to understand, determine and explain patterns and trends, planning for the future, and documenting and presenting findings orally or in writing.

Students use the knowledge, tools, and skills obtained from this course in order to understand, analyze, evaluate, and make predictions about major global developments. This course is designed to nurture perceptive and responsible citizenship, to encourage and support the development of critical thinking skills and lifelong learning, and to help prepare Indiana students for the 21<sup>st</sup> Century.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 4 units maximum
- Counts as a social studies requirement or elective for the Certificate of Completion

### ***Physical Education(ED): Health/Wellness***

#### **3506 Health and Wellness Education C40**

(HLTH and WELL)

Health and Wellness, a course based on Indiana’s Academic Standards for Health and Wellness and provides the basis to help students adopt and maintain healthy behaviors. Health education should contribute directly to a student’s ability to successfully practice behaviors that protect and promote health and avoid or reduce health risks. Through a variety of instructional strategies, students practice the development of functional health information (essential concepts); determine personal values that support health behaviors; develop group norms that value a healthy lifestyle; develop the essential skills necessary to adopt, practice, and maintain health-enhancing behaviors. This course includes the application of priority areas in a planned, sequential, comprehensive health education curriculum. Priority areas include: promoting personal health and wellness, physical activity, and healthy eating; promoting safety and preventing unintentional injury and violence; promoting mental and emotional health, a tobacco- free lifestyle and an alcohol- and other drug-free lifestyle; and promoting human development and family health. This course provides students with the knowledge and skills of health and wellness core concepts, analyzing influences, accessing information, interpersonal communication, decision-making and goal-setting skills, health-enhancing behaviors, and health and wellness advocacy skills.

- Required Prerequisites: none
- Recommended Prerequisites: 8<sup>th</sup> grade health education
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Fulfills the Health and Wellness requirement for all diploma types

### **3506 Applied Health and Wellness Education**

(HEALTH and WELL)

Applied Health & Wellness, a course based on Indiana's Academic Standards for Health & Wellness and provides the basis to help students adopt and maintain healthy behaviors. Health education should contribute directly to a student's ability to successfully practice behaviors that protect and promote health and avoid or reduce health risks. Through a variety of instructional strategies, students practice the development of functional health information (essential concepts); determine personal values that support health behaviors; develop group norms that value a healthy lifestyle; develop the essential skills necessary to adopt, practice, and maintain health-enhancing behaviors. This course includes the application of priority areas in a planned, sequential, comprehensive health education curriculum. Priority areas include: promoting personal health and wellness, physical activity, and healthy eating; promoting safety and preventing unintentional injury and violence; promoting mental and emotional health, a tobacco-free lifestyle and an alcohol- and other drug-free lifestyle; and promoting human development and family health. This course provides students with the knowledge and skills of health and wellness core concepts, analyzing influences, accessing information, interpersonal communication, decision-making and goal-setting skills, health-enhancing behaviors, and health and wellness advocacy skills.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 2 units maximum
- Counts as an Elective or Health & Wellness requirement for the Certificate of Completion

### **3542 Physical Education I (L) C40**

(PHYS ED)

Physical Education I focuses on instructional strategies through a planned, sequential, and comprehensive physical education curriculum which provides students with opportunities to actively participate in at least four of the following: team sports; dual sport activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance, all of which are within the framework of the skills, knowledge and confidence needed by the student for a lifetime of healthful physical activity and fitness. Ongoing assessment includes both written and performance-based skill evaluation. Individual assessments may be modified for individuals with disabilities, in addition to those with IEPs and 504 plans (e.g., chronic illnesses, temporary injuries, obesity, etc.). See 511 IAC 7-27-9, 7-27-11.

- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Fulfills part of the Physical Education requirement for all diplomas
- Classes are co-educational unless the activity involves bodily contact or groupings based on an objective standard of individual performance developed and applied without regard to gender.
- Adapted physical education must be offered, as needed, in the least-restrictive environment and must be based upon an individual assessment.
- As a designated laboratory course, 25% of course time must be spent in activity.

### **3542 Applied Physical Education I (L) (Formally Adaptive PE)**

(PHYS ED)

Applied Physical Education I focuses on instructional strategies through a planned, sequential, and comprehensive physical education curriculum which provides students with opportunities to actively participate in at least four of the following: team sports; dual sport activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance, all which are within the framework of lifetime physical activities and fitness. Ongoing assessment includes individual progress and performance-based skill evaluation.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 2 units maximum
- Counts as the Health & Wellness requirement for the Certificate of Completion

### **3542S Physical Education –Successful complete of a sport**

(PES)

Physical Education II focuses on instructional strategies through a planned, sequential, and comprehensive physical education curriculum which provides students with opportunities to actively participate in four of the following areas that were not included in Physical Education I: team sports; dual sport activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance, all of which are within the framework of the skills, knowledge and confidence needed by the student for a lifetime of healthful physical activity and fitness. Ongoing assessment includes both written and performance-based skill evaluation. Individual assessments may be modified for individuals with disabilities, in addition to those with IEPs and 504 plans (e.g., chronic illnesses, temporary injuries, obesity, etc.). See 511 IAC 7-27-9, 7-27-11.

- Required prerequisites: Physical Education I
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Fulfills part of the Physical Education requirement for all diplomas
- Classes are co-educational unless the activity involves bodily contact or groupings based on an objective standard of individual performance developed and applied without regard to gender.
- Adapted physical education must be offered, as needed, in the least-restrictive environment and must be based upon an individual assessment.
- As a designated laboratory course, 25% of course time must be spent in activity.

### **3544 Applied Physical Education II (L)**

(PHYS ED II)

Applied Physical Education II focuses on instructional strategies through a planned, sequential, and comprehensive physical education curriculum which provides students with opportunities to actively participate in four of the following areas that were not covered in Physical Education I: team sports; dual sport activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance, all which are within the framework of lifetime physical activities and fitness.

Ongoing assessment includes individual progress and performance-based skill evaluation.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 2 units maximum
- Counts as the Health & Wellness requirement for the Certificate of Completion

## *Direct Elective: World Language*

### **2120 Spanish I AHD**

(SPAN I)

Spanish I, a course based on Indiana's Academic Standards for World Languages, introduces students to effective strategies for beginning Spanish language learning, and to various aspects of Spanish-speaking cultures. This course encourages interpersonal communication through speaking and writing, providing opportunities to make and respond to basic requests and questions, understand and use appropriate greetings and forms of address, participate in brief guided conversations on familiar topics, and write short passages with guidance. This course also emphasizes the development of reading and listening comprehension skills, such as reading isolated words and phrases in a situational context and comprehending brief written or oral directions. Additionally, students will examine the practices, products and perspectives of Spanish-speaking culture; recognize basic routine practices of the target culture; and recognize and use situation-appropriate non-verbal communication. This course further emphasizes making connections across content areas and the application of understanding Spanish language and culture outside of the classroom.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a World Language requirement for the Core 40 with Academic Honors Diploma

### **2122 Spanish II AHD**

(SPAN II)

Spanish II, a course based on Indiana's Academic Standards for World Languages, builds upon effective strategies for Spanish language learning by encouraging the use of the language and cultural understanding for self-directed purposes. This course encourages interpersonal communication through speaking and writing, providing opportunities to make and respond to requests and questions in expanded contexts, participate independently in brief conversations on familiar topics, and write cohesive passages with greater independence and using appropriate formats. This course also emphasizes the development of reading and listening comprehension skills, such as using contextual clues to guess meaning and comprehending longer written or oral directions. Students will address the presentational mode by presenting prepared material on a variety of topics, as well as reading aloud to practice appropriate pronunciation and intonation. Additionally, students will describe the practices, products and perspectives of Spanish-speaking culture; report on basic family and social practices of the target culture; and describe contributions from the target culture. This course further emphasizes making

connections across content areas and the application of understanding Spanish language and culture outside of the classroom.

- Required prerequisites: Spanish I
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a World Language requirement for the Core 40 with Academic Honors Diploma

### **2124 Spanish III AHD**

(SPAN III)

Spanish III, a course based on Indiana’s Academic Standards for World Languages, builds upon effective strategies for Spanish language learning by facilitating the use of the language and cultural understanding for self-directed purposes. This course encourages interpersonal communication through speaking and writing, providing opportunities to initiate, sustain and close conversations; exchange detailed information in oral and written form; and write cohesive information with greater detail. This course also emphasizes the continued development of reading and listening comprehension skills, such as using cognates, synonyms and antonyms to derive meaning from written and oral information, as well as comprehending detailed written or oral directions. Students will address the presentational mode by presenting student-created material on a variety of topics, as well as reading aloud to practice appropriate pronunciation and intonation. Additionally, students will continue to develop understanding of Spanish- speaking culture through recognition of the interrelations among the practices, products and perspectives of the target culture; discussion of significant events in the target culture; and investigation of elements that shape cultural identity in the target culture. This course further emphasizes making connections across content areas as well the application of understanding Spanish language and culture outside of the classroom.

- Required prerequisites: Spanish I and II
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a World Language requirement for the Core 40 with Academic Honors Diploma

**French I, II, German I, II may be available on our online platform.**

## *General Electives/Direct Electives*

### **0500 Basic Skills Development**

(BAS SKLS)

Basic Skills Development is a multidisciplinary course that provides students continuing opportunities to develop basic skills including: (1) reading, (2) writing, (3) listening, (4) speaking, (5) mathematical computation, (6) note taking, (7) study and organizational skills, and (8) problem-solving skills, which are essential for high



school course work achievement. Determination of the skills to be emphasized in this course is based on Indiana's standards, individual school corporation general curriculum plans, and the student's Individualized Education Programs (IEP) or other individualized plans. Skills selected for developmental work provide students with the ability to continue to learn in a range of different life situations.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 credit per semester up to 8 semesters, 8 credits maximum
- Counts as an Elective for all diplomas

### **0500 Applied Basic Skills Development**

(BAS SKLS)

Applied Basic Skills Development is a multidisciplinary course that provides students continuing opportunities to develop basic skills including: (1) reading, (2) writing, (3) listening, (4) speaking, (5) mathematical computation, (6) note taking, (7) study and organizational skills, and (8) problem-solving skills, (9) employability skills, which are essential for high school achievement and post-secondary outcomes. Determination of the skills to be emphasized in this course is based on Indiana's standards and Content Connectors, individual school corporation general curriculum plans, and the student's Individualized Education Programs (IEP) or other individualized plans. Skills selected for developmental work provide students with the ability to continue to learn in a range of different life situations and may be applied using instructional practices related to community-based instruction.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 8units maximum
- Counts as an Employability Requirement, Capstone Course or Elective for the Certificate of Completion

### **0532 College-Entrance Preparation (Formally Early College Resource)**

(COL-ENT PREP)

College-Entrance Preparation utilizes individual student score reports from the PSAT, PLAN, and/or ACCUPLACER to prepare students for the SAT, ACT, ACCUPLACER and/or Compass college readiness assessments. Based on student score reports, students will receive targeted instruction to strengthen their foundations in critical reading, writing, mathematics, and science sections of college admission and placement exams. As appropriate, the course will also encompass test taking strategies to prepare students for success on a high-stakes assessment. Teachers are encouraged to use a curriculum with longitudinal, successful results. Course may also include college selection and application units, to better prepare students for overall college-readiness. Being "college ready" means being prepared for any postsecondary education or training experience, including readiness for study at two-year and four-year institutions leading to a post-secondary credential (i.e., a certificate, license, Associate's or Bachelor's degree). Being ready for college means that a high school graduate has the English and mathematics knowledge and skills necessary to qualify for and succeed in entry-level, credit-bearing college courses without the need for remedial coursework.

- Required Prerequisites: none
- Recommended Prerequisites: Algebra II (or concurrent enrollment in Algebra II)

- Credits: 1 semester course, 1 credit per semester, 4 credits maximum
- Counts as an Elective credit for all diplomas.
- The nature of this course allows for successive semesters of instruction provided progressively advanced proficiencies and content standards are utilized.

#### 0524 Community Service (COMM SERV)

Community Service is a course created by public law IC 20-30-14. Community service allows students in grades nine through twelve (HEA 1629) the opportunity to earn up to two high school credits for completion of approved community service projects or volunteer service that “relates to a course in which the student is enrolled or intends to enroll.”

For each student who wishes to earn credit for community service or volunteer service under this law, the student, a teacher of the student, or a community or volunteer service organization must submit an application to the high school principal including:

1. Name of the community service organization or volunteer service organization the student intends to assist.
2. Name, address, and telephone number of the director or supervisor of the community service organization or volunteer service organization and, if different from the director or supervisor, the name, address, and telephone number of the individual assigned by the community or volunteer service organization to supervise the student at the activity site.
3. Nature of the community service or volunteer service performed by the student with a certification that the service performed by the student is voluntary.
4. Total number of hours the student intends to serve the community service organization or volunteer service organization during the school year.
5. Written statement by the director or supervisor of the community service organization or volunteer service organization certifying that the information included in the application is an accurate reflection of:
6. The student’s expectations with regard to the number of hours of service contemplated to be performed; and b. The community service organization’s or the volunteer service organization’s need to acquire the student’s service.
7. Description of: a. The educational or career exploration benefits the student and the school should expect to gain, including the student learning standards to be achieved, from the student’s community or volunteer service participation; and b. The service and benefit the community service organization or volunteer service organization expects to gain from the student’s participation.
8. Description of how the community or volunteer service activity relates to a course in which the student is enrolled or intends to enroll.
9. Manner and frequency in which the student and the community or volunteer service activity will be evaluated.
10. Name of the certificated school employee who will be responsible for monitoring and evaluating the student’s activity and performance and assigning the student a grade for participation under this section.
11. Any other information required by the principal/school administration.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 to 2 semester course, 1 credit per semester, up to 2 semesters, 2 credits maximum

- Counts as a Directed Elective or Elective for all diplomas
- Students must submit an application for this course by November 1.
- Go to [www.iga.in.gov](http://www.iga.in.gov) and search for Code IC 20-30-14 for more information

#### 0524 Applied Community Service (COMM SERV)

Applied Community Service is a course created by public law IC 20-30-14. Community service allows, students in grades nine through twelve (HEA 1629) opportunity to earn up to two high school credits for completion of approved community service projects or volunteer service that “relates to a course in which the student is enrolled or intends to enroll.”

- Required Prerequisites: none
- Recommended Prerequisites: none
- Applied Units: 2units maximum
- Counts as an Employability Requirement, Capstone Course or Elective for the Certificate of Completion

#### 0520 Peer Tutoring (PEER TUTR)

Peer Tutoring provides high school students with an organized exploratory experience to assist students in kindergarten through grade twelve (K-12), through a helping relationship, with their studies and personal growth and development. The course provides opportunities for the students taking the course to develop a basic understanding of individual differences and to explore career options in related fields. Peer Tutoring experiences are preplanned by the teacher trainer and any cooperating teacher under whom the tutoring is to be provided. It must be conducted under the supervision of a licensed teacher. The course provides a balance of class work relating to the development of and use of: (1) listening skills, (2) communication skills, (3) facilitation skills, (4) decision-making skills, and (5) teaching strategies.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as an Elective for all diplomas

#### 0509 Jobs for America’s Graduates (JAG)

Jobs for America’s Graduates (JAG) is a state-based, national non-profit organization dedicated to preventing dropouts among young people who are most at-risk. JAG’s mission is to keep young people in school through graduation and provide work-based learning experiences that will lead to career advancement opportunities or to enroll in a postsecondary institution that leads to a rewarding career.

JAG students receive adult mentoring while in school and one year of follow-up counseling after graduation. The JAG program is funded through grants provided by the Indiana Department of Workforce Development.

- Juniors and Seniors only

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credits per semester, 4 credits maximum
- Counts as an elective for all diplomas

### 1086 Student Media

(STDNT MEDIA)

Student Media, a course based on the High School Journalism Standards and the Student Media Standards, is the continuation of the study of Journalism. Students demonstrate their ability to do journalistic writing and design for high school media, including school newspapers, yearbooks, and a variety of other media formats. Students follow the ethical principles and legal boundaries that guide scholastic journalism. Students express themselves publicly with meaning and clarity for the purpose of informing, entertaining, or persuading. Students work on high school media staffs so that they may prepare themselves for career paths in journalism, communications, writing, or related fields.

- Required Prerequisites: none
- Recommended Prerequisites: Journalism, Mass Media, or teacher recommendation
- Credits: 1 semester course, 1 credit per semester, 8 credits maximum. The nature of this course allows for successive semesters of instruction at advanced levels. may be offered over three or four years by titling the course Beginning, Intermediate, or
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills the Fine Arts requirement for the Core 40 with Academic Honors.
- NOTE: This is the designated School Media course, including newspaper and yearbook

### 5550 Graphic Design and Layout

(GRAPH DES LT)

Graphic Design and Layout includes organized learning experiences that incorporate a variety of visual art techniques as they relate to the design and execution of layouts and illustrations for advertising, displays, promotional materials, and instructional manuals. Instruction also covers advertising theory and preparation of copy, lettering, posters, and artwork in addition to incorporation of photographic images. Communication skills will be emphasized through the study of effective methods used to design commercial products that impart information and ideas. Advanced instruction might also include experiences in various printing processes as well as activities in designing product packaging and commercial displays or exhibits.

- Required Prerequisites: none
- Recommended Prerequisites: Computer Illustration and Graphics
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

### 5230 Information Technology Support I

(IN TECH SUPP)

Information Technology Support allows students to explore how computers work. Students learn the functionality of hardware and software components as well as suggested best practices in maintenance and safety issues. Through hands-on activities and labs, students learn how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems.

- Required Prerequisites: none
- Recommended Prerequisites: Digital Applications and Responsibility; Intro to Computer Science
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

5231 Information Technology Support II 

(INTO ENTR)

Information Technology Support II, Capstone is designed to for students to showcase the knowledge gained from the Information Technology Pathway. Through troubleshooting hardware, software, and networks, students solve problems through a variety of real-world IT problems. Throughout the course, students communicate with other team members and document progress to fix a variety of devices.

- Required Prerequisites: Information Technology Support
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

5610 Industrial Automation and Robotics I



(AUTO ROB I)

Industrial Automation and Robotics I, will introduce students to design and programming concepts in basic robots that use sensors and actuators to solve specific problems and complete specific tasks. This will include introductory programming autonomous mode. Students will also learn to program a humanoid robot, tethered and in autonomous mode, able to react to specific circumstances and perform human-like tasks when programming is complete. This course will provide fundamentals in industrial robotics basic programming and operations. Students will program an industrial robot through explanation of a teach pendant and use proper programming commands with hands-on utilization of an industrial robot. This course will provide fundamental knowledge and skills in basic lasers, pneumatics, hydraulics, mechanics, basic electronics, and programmable logic controllers along with an understanding of career pathways in this sector.

- Required Prerequisites: none
- Recommended Prerequisites: Digital Electronics
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum

5612 Industrial Automation and Robotics II



(AUTO ROB II)

Industrial Automation and Robotics II, focuses on industrial robots, programming PLC's, automating cells, Advanced programming, and designing/building task oriented robots. Students will engage in active learning,

critical thinking, and problem solving through advanced robotic procedures and processes. Students will learn industrial robotic programming languages, as well as strategies for improving efficiency through automation. Students will study basic computer numerical controlled (CNC) machining and will combine automation and CNC machining to perform common industrial tasks. They will also apply knowledge to real world situations to create working solutions.

- Required Prerequisites: Industrial Automation and Robotics I
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as a quantitative reasoning course

### *Direct Electives: Fine Arts*

2 required for **AHD**

4174 Advanced Orchestra (L)  
(ADV ORCH)

Advanced Orchestra is based on the Indiana Academic Standards for High School Instrumental Music. Students in this ensemble are provided with a balanced comprehensive study of music through the orchestra, string and/or full orchestra, which develops skills in the psychomotor, cognitive, and affective domains. Ensemble and solo activities are designed to develop and refine elements of musicianship including tone production, technical skills, intonation, music reading skills, listening skills, analyzing music, studying historically significant styles of orchestral literature, and integration of other applicable disciplines. Experiences include improvising, conducting, playing by ear, and sight-reading. Students develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom.

- Required Prerequisites: none
- Recommended Prerequisites: Beginning and Intermediate Orchestra
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma

4166 Beginning Orchestra (L)  
(BEG ORCH)

Beginning Orchestra is based on the Indiana Academic Standards for High School Instrumental Music. Students in this ensemble are provided with a balanced comprehensive study of music through the orchestra, string and/or full orchestra, which develops skills in the psychomotor, cognitive, and affective

domains. Ensemble and solo activities are designed to develop and refine elements of musicianship including tone production, technical skills, intonation, music reading skills, listening skills, analyzing music, studying historically significant styles of orchestral literature, and integration of other applicable disciplines. Experiences include improvising, conducting, playing by ear, and sight-reading. Students develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory course

#### 4164 Jazz Ensemble (L) (JASS ENS)

Jazz Ensemble is based on the Indiana Academic Standards for High School Instrumental Music. Students taking this course develop musicianship and specific performance skills through group and individual settings for the study and performance of varied styles of instrumental jazz. Instruction includes the study of the history, formative, and stylistic elements of jazz. Students develop their creative skills through improvisation, composition, arranging, performing, listening, and analyzing. A limited amount of time outside of the school day may be scheduled for rehearsals and performances. In addition, a limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students must participate in performance opportunities outside of the school day that support and extend the learning in the classroom. Student participants must also be receiving instruction in another band or orchestra class offering at the discretion of the director.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills requirement for 1 of 2 Fine Arts credits for the Core 40 with Academic Honors Diploma if students are enrolled in another band or orchestra course
- Laboratory course

#### 4162 Symphonic Band (L) (INSTR ENS)

Instrumental Ensemble is based on the Indiana Academic Standards for High School Instrumental Music. Students taking this course are provided with a balanced comprehensive study of chamber ensemble and solo literature, which develops skills in the psychomotor, cognitive and affective domains. Students develop and refine elements of musicianship including tone production, technical skills, intonation, music reading skills,

listening skills, analyzing music, studying historically significant styles of literature as pertaining to chamber ensemble and solo literature, and integration of other applicable disciplines. Experiences include improvising, conducting, playing by ear, and sight-reading. Students develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory course

#### **4006 Advanced Three-Dimensional Art (L)**

(ADV 3D ART)

Advanced Three-Dimensional Art is a course based on the Indiana Academic Standards for Visual Art. Students in this course build on the sequential learning experiences of Introduction to Three-Dimensional Art that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works. Students explore historical and cultural background and connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; create three-dimensional works of art, reflect upon the outcomes, and revise their work; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. They identify ways to utilize and support art museums, galleries, studios, and community resources.

- Required Prerequisites: none
- Recommended Prerequisites: Intro to Two-Dimensional Art (L), Intro to Three-Dimensional Art (L)
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory Course

#### **4004 Advanced Two- Dimensional Art (L)**

(ADV 2D ART)

Advanced Two-Dimensional Art is a course based on the Indiana Academic Standards for Visual Art. Students in this course builds on the sequential learning experiences of Introduction to Two-Dimensional Art that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works. Students explore historical and cultural background and connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; create two-dimensional works of art, reflect upon the outcomes, and revise their work; relate art to other disciplines



and discover opportunities for integration; and incorporate literacy and presentational skills. They identify ways to utilize and support art museums, galleries, studios, and community resources.

- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Two-Dimensional Art (L)
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory Course

#### **4040 Ceramics (L)-(Art Studio)**

(CERAMICS)

Ceramics is a course based on the Indiana Academic Standards for Visual Art. Students in ceramics engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works. Students create works of art in clay utilizing the processes of hand building, molds, wheel throwing, slip and glaze techniques, and the firing processes. They reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries, and studios, and identify art-related careers.

- Required Prerequisites: Introduction to Two-Dimensional Art (L), Introduction to Three-Dimensional Art
- Recommended Prerequisites: Introduction to Two-Dimensional Art, Introduction to Three-Dimensional Art
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory Course

#### **4002 Introduction to Three Dimensional Art (L)**

(3D ART)

Introduction to Three-Dimensional Art is a course based on the Indiana Academic Standards for Visual Art. Students taking this course engage in sequential learning experiences that encompass art history, art criticism, aesthetics, production, and integrated studies and lead to the creation of portfolio quality works. Students explore historical and cultural background and connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; create three-dimensional works of art, reflect upon the outcomes, and revise their work; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. They identify ways to utilize and support art museums, galleries, studios, and community resources.

- Required Prerequisites: none

- Recommended Prerequisites: Introduction to Two-Dimensional Art (L)
- Credits: 1 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory course

#### **4000 Introduction to Two Dimensional Art (L)**

(2D ART)

Introduction to Two-Dimensional Art is a course based on the Indiana Academic Standards for Visual Art. Students taking this course engage in sequential learning experiences that encompass art history, art criticism, aesthetics, production, and integrated studies and lead to the creation of portfolio quality works. Students explore historical and cultural background and connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; create two-dimensional works of art, reflect upon the outcomes, and revise their work; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. They identify ways to utilize and support art museums, galleries, studios, and community resources.

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory course

#### **4062 Photography (L) -(Art Studio)**

(PHOTOGRPH)

Photography is a course based on the Indiana Academic Standards for Visual Art. Students in photography engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works, creating photographs, films, and videos utilizing a variety of digital tools and darkroom processes. They reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries, and studios, and identify art-related careers.

- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Two-Dimensional Art (L)
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Counts as a Directed Elective or Elective for all diplomas

## **Career and Technical (CTE)**

Pathway classes are a **REQUIREMENT** for graduation. Students **MUST** complete a **PATHWAY** with a C average to graduate.

Pathway Classes are dual credit and available for college credit while earning your high school credit. Dual credits are not mandatory for graduation, but a great perk. Look for the DC after the class.

**GRADUATING CLASS OF 2025 and BEYOND choose from these pathway classes.**

### **Pathway: Advanced Manufacturing**

#### **7109 Principles of Precision Machining**

PRIN PREC MACH

Principles of Precision Machining will instruct students in shop safety, industrial terminology, tools and machine tooling, measurement, and layout. Includes laboratory exercises to begin project completion of turning, milling, and grinding applications. This course incorporates certification assessment for the National Institute of Metalworking Skills Measurement, Materials and Safety, Job Planning, Benchwork, and Layout Certification. Applies mathematics in solving engineering and design related problems in the areas of die design, fabrication, assembly, special machinery, die casting and molds. Emphasizes geometric dimensioning and applying tolerances.

- Recommended Grade: 9, 10, 11
- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Advanced Manufacturing
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

#### **7105 Machining Fundamentals**

MACH FUN

Machining Fundamentals instructs students in shop safety, industrial terminology, and provides laboratory experience toward project completion on the conventional lathe, vertical and/or horizontal milling machine, and abrasive processing machines, including super abrasive technology processes. This course incorporates certification assessment for the National Institute of Metalworking Skills Manual Milling Certification.

- Recommended Grade: 10, 11, 12
- Required Prerequisites: Principles of Precision Machining
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Qualifies as a quantitative reasoning course

## 7107 Precision Machining

PREC MACH

Precision Machining introduces and instructs students in all aspects of Computer Numeric Control (CNC) machine operation and setup. The student will set up and operate CNC mills and lathes utilizing set-up, production, in-process inspection, and preventive maintenance methods similar to what the student may experience in the present day work environment. This course prepares students to take the NIMS Level I CNC operations certification.

- Recommended Grade: 10, 11, 12
- Required Prerequisites: Principles of Precision Machining; and Machining Fundamentals
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Qualifies as a quantitative reasoning course

## WELDING PATHWAY

### 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.

- Recommended Grade: 9, 10, 11
- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Manufacturing
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## **7111 Shielded Metal Arc Welding**

SHLD MAW

This course 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.

- Required Prerequisites: Principles of Welding Technology
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## **7101 Gas Welding Processes**

GAS WEL PRC

A course 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, fluxcore, and aluminum wire. Test plates will be made for progress evaluation. Schools will have the option to introduce students to both MIG and TIG welding rather than focusing solely on MIG welding.

- Recommended Grade: 10, 11, 12
- Required Prerequisites: Principles of Welding Technology
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## **ENTREPRENEUR PATHWAY**

### **7154 Principles of Entrepreneurship**



PRIN ENTR

Principles of Entrepreneurship focuses on the characteristics of a successful entrepreneur and the creation of a business concept. The course helps students explore the answers to questions about what is on the entrepreneur journey before the idea is launched in the world. Is your idea worth pursuing? What are the risks in starting a business? The course helps students apply what they have learned from the content when they write a Personal Vision Statement, a Business Concept Statement, and an Elevator Pitch.

- Recommended Grade: 9, 10, 11
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## **7148 Entrepreneurial Marketing and Management**

ENT MAR MAN

Entrepreneurial Marketing and Management is targeted to students interested in creating and growing their own businesses. The course will focus on key marketing strategies particularly relevant for new ventures. Students will apply marketing concepts to entrepreneurial company challenges, which include creating and nurturing relationships with new customers, suppliers, distributors, employees and investors; and understand the special challenges and opportunities involved in developing marketing strategies "from the ground up."

- Recommended Grade: 10, 11, 12
- Required Prerequisites: Principles of Entrepreneurship
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## **7147 Entrepreneurial Financial Management**

ENT FIN MAN

Entrepreneurial Financial Management will help students identify and evaluate the various sources available for funding a new enterprise; demonstrate an understanding of financial terminology; read, prepare, and analyze basic financial statements; estimating capital requirements and risk, exit strategies; and prepare a budget for their business, including taxes and personnel costs. In addition, the student should be able to explain the importance of working capital and cash management. The student should also be able to identify financing needs, and prepare sales forecasts.

- Recommended Grade: 10, 11, 12
- Required Prerequisites: Principles of Entrepreneurship
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## HEALTHCARE PATHWAY +

### 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.

- Recommended Grade: 9, 10, 11
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

### 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.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, maximum of 2 credits
- Counts as a directed elective or elective for all diplomas

### 7166 Healthcare Specialist: CNA +

HC SPEC CAN

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.

- Recommended Grade: 10, 11, 12
- Required Prerequisites: Principles of Healthcare
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## **7164 Certified Clinical Medical Assistant (CCMA) +**

CERT CL MED AST

The Certified Clinical Medical Assistant course will prepare students for the National Healthcare Association CCMA exam. Instruction includes taking and recording vital signs, preparing patients for examination, patient education, and assisting the physician during the exam. The collecting and preparation of laboratory specimen and basic laboratory test will be covered. Prepares for the administration of medication, venipuncture, ECG, and wound care. Provides a basic understanding of the clinical and administrative duties and responsibilities pertinent to medical offices. Includes instruction in medical correspondence and records, case histories of patients, filing, telephone procedures, appointment scheduling, receptionist duties, and processing mail. Written, verbal and nonverbal communications according to patient needs are covered as well as documentation and associated legal and ethical boundaries.

- Recommended Grade: 10, 11, 12
- Required Prerequisites: Principles of Healthcare, Medical Terminology
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## **INFORMATION TECHNOLOGY PATHWAY**

### **7183 Principles of Computers and Informatics**

PRIN COMP INFO

Principles of Computers and Informatics introduces students to terminology, concepts, theory and fundamental skills used to implement information systems. Topics include the history and trends of computing, operating systems, database technology, security, cloud implementations and other concepts associated with applying the principles of good information management to the organization. Additionally, students will be introduced to algorithms, logic development and flowcharting as tools used to document computer logic through the use of basic scripting and simple programming code.

- Recommended Grade: 9, 10, 11
- Required Prerequisites: none



- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## **7185 Website and Database Development**

### WEB DATA DEV

Website and Database Development will provide students a basic understanding of the essential Web and Database skills and business practices that directly relate to Internet technologies used in Web site and Database design and development. Students will learn to develop Web sites using Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Additionally students will be introduced to the basic concepts of databases including types of databases, general database environments, database design, normalization and development of tables, queries, reports, and applications. Students will be familiarized with the use of ANSI Standard Structured Query Language. Students will be introduced to data concepts such as data warehousing, data mining, and BIG Data. Students will develop a business application using database software such as Microsoft Access.

- Recommended Grade: 10, 11, 12
- Required Prerequisites: Principles of Computers and Informatics
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## **7184 Software Development**

### SOFT DEV

Software Development introduces students to concepts and practices of programming languages and software development. Students are introduced to algorithms and development tools used to document/implement computer logic. Discusses the history of software development, the different types of programming such as real time processing, web/database applications, and different program development environments. Concepts will be applied using different programming languages, and students will develop and test working programs in an integrated system.

- Recommended Grade: 10, 11, 12
- Required Prerequisites: Principles of Computers and Informatics
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

## ENGINEERING PATHWAY

### 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 solving 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.

- Recommended Grade: 9, 10, 11
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

### 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.

- Recommended Grade: 10, 11
- Required Prerequisites: Introduction to Engineering Design
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum

- Counts as a directed elective or elective for all diplomas
- Fulfills a science course requirement for all diplomas
- Qualifies as a quantitative reasoning course

## 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 of 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.

- Recommended Grade: 11, 12
- Required Prerequisites: Introduction to Engineering Design and/or Principles of Engineering
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Qualifies as a quantitative reasoning course

**THESE CLASSES ARE FOR STUDENTS GRADUATING IN 2022, 2023, 2024**

## 5782 Precision Machining I

(PCSN MACH I)

Precision Machining I provides students with a basic understanding of the precision machining processes used in industry, manufacturing, maintenance, and repair. The course instructs the student in industrial safety, terminology, tools and machine tools, measurement and layout. Students will become familiar with the setup and operation of power saws, drill presses, lathes, milling machines, grinders and an introduction to CNC (computer numerically controlled) machines.

- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Advanced Manufacturing
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as a quantitative reasoning course

## 5784 Precision Machining II

(PCSN MACH II)

Precision Machining II is a more in-depth study of skills learned in Precision Machining I, with a stronger focus in CNC setup/operation/programming. 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 included.

- Required Prerequisites: Precision Machining I
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as a quantitative reasoning course

## 5776 Welding Technology I

(WELD TECH I)

Welding Technology I includes classroom and laboratory experiences that develop a variety of skills in oxy-fuel cutting and Shielded Metal Arc welding. This course is designed for individuals who intend to make a career as a Welder, Technician, Sales, 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 college and career success.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

## 5778 Welding Technology II

(WELD TECH II)

Welding Technology II builds on the skills covered in Welding Technology I. 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 college and career success.

- Required Prerequisites: Welding Technology I
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

## **Pathway: Business, Marketing, and Entrepreneurship**

### 5967 Introduction to Entrepreneurship

(INTO ENTR)

Introduction to Entrepreneurship provides an overview of what it means to be an entrepreneur. Student will learn about starting and operating a business, marketing products and services, and how to find resources to help in the development of a new venture. This course is ideal for students interested in starting their own art gallery, salon, restaurant, etc.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

## 5914 Principles of Marketing

(PRN MRKT)

Principles of Marketing provides a basic introduction to the scope and importance of marketing in the global economy. Emphasis is placed on oral and written communications, mathematical applications, problem-solving, and critical thinking skills as they relate to advertising/promotion/selling, distribution, financing, marketing-information management, pricing, and product/service management.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum

## 5966 Entrepreneurship and New Ventures Capstone

(ENT VENT CAP)

Entrepreneurship and New Ventures Capstone introduces entrepreneurship, and develop the skills and tools critical for starting and succeeding in a new venture. The entrepreneurial process of opportunity recognition, innovation, value proposition, competitive advantage, venture concept, feasibility analysis, and “go to” market strategies will be explored through mini-case studies of successful and unsuccessful entrepreneurial start-ups. Additionally, topics of government and legal restrictions, intellectual property, franchising location, basic business accounting, raising startup funding, sales and revenue forecasting, and business plan development will be presented through extensive use of word processing, spreadsheet and presentation software.

- **Required Prerequisites: a minimum of 4 credits of introductory or advanced career and technical education courses from the Business and Marketing Pathway: Introduction to Business, Introduction to Entrepreneurship, Principles of Business Management, Principles of Marketing, Introduction to Accounting, Advanced Accounting, Strategic Marketing, Business Law and Ethics, Global Economics or Digital Applications and Introduction to Entrepreneurship.**
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

*Pathway: Health Science* 

## 5282 Health Science Education I

(HLTH ED I)

Health Science Education I is a course designed to provide a foundation of skills development to specific health careers including; patient care, nursing care, dental care, animal care, medical laboratory, and public health. Students will also receive an introduction to healthcare systems, anatomy, physiology, and medical terminology. Laboratory experiences with industry applications are organized and planned around the activities associated with the student’s career objectives. Job seeking and job maintenance

skills, personal management skills, self-analysis to aid in career selection and completion of the application process for admission into a post-secondary program of their choice are also included in this course. Participation in HOSA encourages the development of leadership, communication and career related skills, and opportunities for community service.

- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Health Science Careers
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, maximum of 6 credits
- Counts as a Directed Elective or Elective for all diplomas

## 5284 Health Science Education II: Nursing +

(HSE II NURS)

Health Science Education II: Nursing is an extended laboratory experience designed to provide students with the opportunity to assume the role of nurse assistant. Students have the opportunity to learn, and then to practice those technical skills previously learned in the classroom at qualified clinical sites while under the direction of licensed nurses. These sites may include extended care facilities, hospitals and home health agencies. Throughout the course, students will focus on learning about the healthcare system and employment opportunities at a variety of entry levels of the healthcare field; 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 a variety of healthcare settings. Additionally, students will build their essential job-related skills such as providing appropriate personal care to patients; reporting necessary information to nursing staff; operating and monitoring medical equipment; teaching and assisting patients and families with the management of their illness or injury; and performing general health screenings. This course 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 encourages the development of leadership, communication and career related skills, and opportunities for community service.

- Required Prerequisites: none
- Recommended Prerequisites: Health Science Education I
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, maximum of 6 credits
- Counts as a Directed Elective or Elective for all diplomas

## 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 pronunciation, 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.

- **Required Prerequisites: none**
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, maximum of 2 credits
- Counts as a Directed Elective or Elective for all diplomas

## **Pathway: STEM/Information Technology**

### **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 solving 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. Schools may use the PLTW curriculum to meet the standards for this course. Schools using the curriculum and are part of the Project Lead the Way network must follow all training and data collection requirements.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

### **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.

- Required Prerequisites: Introduction to Engineering Design



- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a science course requirement for all diplomas
- Qualifies as a quantitative reasoning course

## 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 of 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. Schools may use the PLTW curriculum to meet the standards for this course. Schools using the curriculum and are part of the Project Lead the Way network must follow all training and data collection requirements.

- Required Prerequisites: Introduction to Engineering Design and Principles of Engineering
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as a quantitative reasoning course

## 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 individuals communicate(s) 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. Schools may use the PLTW curriculum to meet the standards for this course. Schools using the curriculum and are part of the Project Lead the Way network must follow all training and data collection requirements.

- **Required Prerequisites: Introduction to Engineering Design, Principles of Engineering Design, and one pre-engineering specialty course**
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3s credits per semester, 6 credits max
- Counts as a Directed Elective or Elective for all diplomas

- Qualifies as a quantitative reasoning course

## 4803 Introduction to Computer Science

(INTO CS)

Introduction to Computer Science allows students to explore the world of computer science. Students will gain a broad understanding of the areas composing computer science. Additionally, there is a focus on the areas of computer programming, gaming/mobile development, and artificial intelligence/robotics.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

## 4801 Computer Science I

(COM SCI I)

Computer Science I introduces the structured techniques necessary for the efficient solution of business related computer programming logic problems and coding solutions into a high-level language. The fundamental concepts of programming are provided through explanations and effects of commands and hands-on utilization of lab equipment to produce accurate outputs. Topics include program flow-charting, pseudo coding, and hierarchy charts as a means of solving problems. The course covers creating file layouts, print charts, program narratives, user documentation, and system flowcharts for business problems; algorithm development and review, flowcharting, input/output techniques, looping, modules, selection structures, file handling, control breaks, and offers students an opportunity to apply skills in a laboratory environment.

- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Computer Science
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits max
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a science course requirement for all diplomas
- Qualifies as a quantitative reasoning course

## 5236 Computer Science II

(CS II PROG)

Computer Science II explores and builds skills in programming and a basic understanding of the fundamentals of procedural program development using structured, modular concepts. 67 Indiana Department of Education High School Course Titles and Descriptions Coursework emphasizes logical program design involving user-defined functions and standard structure elements. Discussions will include the role of data types, variables, structures, addressable memory locations, arrays and pointers,

and data file access methods. An emphasis on logical program design using a modular approach, which involves task-oriented program functions.

- Required Prerequisites: Computer Science I
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a science course requirement for all diplomas
- Qualifies as a quantitative reasoning course

PATHWAYS required for graduation.

**2023-2024 Graduates MUST complete at least one pathway with a C average in the pathway classes.**

	Level A Class	Level B Class
Business/Entrepreneur:	Principles of Business (4562)	Office and Administration Business (5268)
Health Sciences:	Health Science I(5282)	Health Science II: CNA Prep (5284)
	Health Science I(5282)	Health Science II: MA Prep (6138)
Information Tech (IT)	Computer Science I (4801)	Computer Science II (5236)
Precision Machining:	Precision Machining I (5782)	Precision Machining II (5784)
Engineering:	Principles of Engineering (5644)	Computer Integrated Manufacturing (5534)
Welding:	Welding Technology I (5776)	Welding Technology II (5778)

**2025-BEYOND Graduates MUST complete at least one pathway with a C average in the pathway classes.**

	Principles	CTE Concentrator A	CTE Concentrator B
<b>Business/Entrepreneur:</b>	Prin of Entrep (7154)	New Venture Devel (7148)	Small Bus Operations (7147)
<b>Health Sciences:</b>	Prin of HealthCare (7168)	Med Term (5274)	HealthCare Spec: CNA (7166)
	Prin of HealthCare (7168)	Med Term (5274)	HealthCare Spec: CMA (7164)
<b>Information Tech (IT):</b>	Prin of Computing (7183)	Website Data/Dev (7185)	Software Develop (7184)
<b>Precision Machining:</b>	Prin of Prec Mach (7109)	Prec Mach Fund(7105)	Adv Prec Mach (7107)
<b>Engineering:</b>	Intro to Engin/Desn (4802)	Princ of Engin (5644)	Comp Integ Manuf (5534)
<b>Welding:</b>	Prin of Weld Tech (7110)	Shielded Metal Arc (7111)	Gas Welding Proc (7101)