

# Madison Consolidated High School Course Curriculum Guide 2022-23

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## General Information

The information contained in this pamphlet was compiled by the Madison Consolidated High School administration and all departments within the school. This information is made available to all students during the second semester of each school year to assist them with academic planning. Students and parents should note the course prerequisites. The prerequisite informs the student of the requirements that must be completed before registering for the course. The selection and request of courses is the responsibility of the student and their parent/guardian. School counselors are available to guide students with their course selections. Course fees are not set until the start of the school year and fees are subject to change due to course selections. It is the policy of Madison Consolidated Schools not to discriminate on the basis of race, color, religion, sex, national origin, handicap, or age, in its programs or employment policies as required by the Indiana Civil Rights Act (I.C. 1971, 22-9-1); Public Law 218 (I.C. 1971, Title 20); Titles VI and VII (Civil Rights Act 1964); the Equal Pay Act of 1973; Title IX (1972 Education Amendments); Public Law 94-142; and Public Law 93-112, Section 504. This application will be given every consideration, but its receipt does not imply that the individual will be hired.

## Important Terms

“**High school diploma**” means a certificate of graduation issued by the governing body of a school corporation certifying that the student has satisfied the minimum requirements for graduation from a high school of the school corporation.

“**Credit**” will mean the satisfactory completion of a course(s) that an Indiana Department of Education approved course, follows Indiana academic standards, and meets the specified instructional minutes per class per day. Credit is awarded when a passing grade is achieved in the 18 weeks course. Madison Consolidated High School requires a total of 40 earned credits for the Core 40 Diploma, and 47 credits for a Core 40 Diploma with Academic Honors, and/or Core 40 Diploma with Technical Honors.

“**Semester**” (18 weeks) means one-half (½) of a regular school year.

“**Required courses**” are courses of study that are required for graduation by either the state or local policy.

“**Elective courses**” are courses of study that students may select in order to develop skill in their areas of interest.

“**Prerequisites**” are conditions that should be met before the class can be taken.

“**Directed electives**” give students opportunities to explore areas other than English, mathematics, social studies, and science. Five (5) directed electives are required for the Core 40 diploma. Directed electives can be any combination of electives from the following:

- World Languages
- Fine Arts
- Career - Technical

## College Courses for High School Credit

MCHS allows qualified students to enroll part-time in college courses for dual high school/college credit. These courses may be taken either at MCHS or on the college campus while the student is still in high school. Depending upon the course selected by the student and/or the college/university, the student may or may not be required to pay the tuition. Enrolling in a dual credit high school course does not automatically guarantee college credit. All students seeking dual credit must complete the minimum application requirements for admission into the college courses.

Several Dual Credit specific programs are available at MCHS. Students are encouraged to use and select courses from the Core Transfer Library at [www.TransferIN.net](http://www.TransferIN.net) to ensure their college of choice will accept the dual credit. The dual credit courses are subject to change based upon the policy and procedures of the postsecondary schools. Dual credit courses are denoted throughout the curriculum guide with “\*\*\* Dual Credit Opportunity\*\*\*” next to the course title. *See your counselor for additional details regarding Dual Credit opportunities.*

## Notes:

1. If a student fails a required course, the course should be repeated as soon as possible.
2. College entrance requirements usually exceed the minimum graduation requirements. Therefore, EACH STUDENT IS RESPONSIBLE for learning the requirements for the college or post high school program of his/ her choice.
3. On a 7-period day, students will earn credit for a course at the end of each semester. Thus, a 36-week, 2-credit course will earn one credit upon passing the first semester and one credit upon passing the second semester.
4. **Athletic Eligibility for High School or College**
  - Consult the MCHS Athletic Handbook for a list of IHSAA eligibility requirements.
  - Those students wishing to participate in either NCAA Division I or II sports at the college level must register with the NCAA Eligibility Center for Initial Eligibility at the end of the junior year. Students should work closely with their counselor and coach to ensure that all NCAA criteria are met. For a list of NCAA Core Courses and eligibility requirements visit <https://web1.ncaa.org/eligibilitycenter/common/index.html>

## Diploma Requirements

The completion of the Indiana Core 40 Diploma is the minimum Indiana graduation requirement. The following pages describe the requirements for Core 40, Core 40 with Academic Honors, and Core 40 with Technical Honors. Indiana's Core 40 curriculum provides the academic foundation all students need to succeed in college and the workforce.

If the decision is made to opt-out of Core 40, the student is required to complete the course and credit requirements for a General Diploma and the career/academic sequence the student will pursue is determined.

NOTE: According to SSACI (State Student Assistance Commission of Indiana), only students who receive a Core 40 with Academic Honors or a Core 40 with Technical Honors Diploma will receive 100 percent of the financial aid in which they are eligible. Students with a Core 40 or General Diploma will only receive 80 percent of the financial aid for which they are eligible and may not be able to apply aid money toward remediation courses.

## Graduation Course and Credit Requirements (Class of 2016 & Beyond)



<b>English/ Language Arts</b>	<b>8 credits</b>
	Including a balance of literature, composition and speech
<b>Mathematics</b>	<b>6 credits (in grades 9-12)</b>
	2 credits: Algebra I
	2 credits: Geometry
	2 credits: Algebra II <small>Students must take a math or quantitative reasoning course each year in high school.</small>
<b>Science</b>	<b>6 credits</b>
	2 credits: Biology I
	2 credits: Chemistry I or Physics I or Integrated Chemistry-Physics
	2 credits: any Core 40 science course
<b>Social Studies</b>	<b>6 credits</b>
	2 credits: U.S. History
	1 credit: U.S. Government
	1 credit: Economics
	2 credits: World History/Civilization or Geography/History of the World
<b>Directed Electives</b>	<b>5 credits</b>
	World Languages
	Fine Arts: (Art, Band, Choir, Theatre)
	Career/Technical Area of Choice
<b>Physical Education</b>	<b>2 credits</b>
<b>Health and Wellness</b>	<b>1 credit</b>
<b>Preparing for College &amp; Careers</b>	<b>1 credit</b>
<b>Electives*</b>	<b>Choose any courses from which the prerequisites have been met.</b> <small>(Career and Career Pathway courses recommended)</small>

 **with Academic Honors**  
(MCHS = 47 credits)

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

- Complete all requirements for Core 40. (See next page)
- Earn 2 additional Core 40 math credits. (8 credits total)
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- 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. (Art, Band, Choir, or Theatre)
- 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 transcribed college credits in dual credit courses from the approved dual credit list.
  - C. Earn two of the following:
    - A minimum of 3 verifiable transcribed college credits from the approved dual credit list,
    - 2 credits in AP courses and corresponding AP exams,
    - 2 credits in IB standard level courses and corresponding IB exams
  - D. Earn a combined score of 1260 or higher on the SAT critical reading, mathematics and writing sections and a minimum score of 560 on M and 590ERW.
  - E. Earn an ACT composite score of 26 or higher and complete written section

 **with Technical Honors**  
(MCHS = 47 Credits)

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

- Complete all requirements for Core 40. (See above)
- Earn 6 credits in the college and career preparation courses in a state-approved College & Career Pathway and one of the following:
  - Pathway designated industry-based certification or credential, or
  - Pathway dual credits from the lists of priority courses resulting in 6 transcribed 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-E) of the Core 40 w/ Academic Honors
  - B. Score at or above the following levels on WorkKeys: Reading for Information - Level 6; Applied Mathematics - Level 6; Locating Information - Level 5
  - C. Earn the following minimum scores) on Accuplacer: Writing 80, Reading 90, Math 75.
  - D. Earn the following minimum score(s) on the Compass; Algebra 66, Writing 70, Reading 80

Graduation Requirements	Graduation Pathway Options
1) <b>High School Diploma</b>	Meet the statutorily defined diploma credit and curricular requirements.
2) <b>Learn and Demonstrate Employability Skills<sup>1</sup></b> (Students must complete <i>at least one</i> of the following.)	Learn employability skills standards through locally developed programs. Employability skills are demonstrated by <u>one</u> the following: <ul style="list-style-type: none"> <li>• <b>Project-Based Learning Experience;</b> OR</li> <li>• <b>Service-Based Learning Experience;</b> OR</li> <li>• <b>Work-Based Learning Experience.<sup>2</sup></b></li> </ul>
3) <b>Postsecondary-Ready Competencies<sup>3</sup></b> (Students must complete <i>at least one</i> of the following.)	<ul style="list-style-type: none"> <li>• <b>Honors Diploma:</b> Fulfill all requirements of either the Academic or Technical Honors diploma; OR</li> <li>• <b>ACT:</b> College-ready benchmarks; OR</li> <li>• <b>SAT:</b> College-ready benchmarks; OR</li> <li>• <b>ASVAB:</b> Earn at least a minimum AFQT score to qualify for placement into one of the branches of the US military; OR</li> <li>• <b>State- and Industry-recognized Credential or Certification;</b> OR</li> <li>• <b>State-, Federal-, or Industry-recognized Apprenticeship;</b> OR</li> <li>• <b>Career-Technical Education Concentrator:</b> Must earn a <u>C average</u> or higher in at least 6 high school credits in a career sequence; OR</li> <li>• <b>AP/IB/Dual Credit/Cambridge International courses or CLEP Exams:</b> Must earn a <u>C average</u> or higher in at least three courses; OR</li> <li>• <b>Locally created pathway</b> that meets the framework from and earns the approval of the State Board of Education.</li> </ul>

## Indiana College Core

Currently, MCHS is partnering with Ivy Tech Community College (ITCC) to offer students the Indiana College Core. Senate Enrolled Act 182 (2012) enables a student who satisfactorily completes an approved program of general education in any state educational institution in Indiana to transfer that coursework to any other state educational institution as a block of 30 credit hours towards the general education core requirements, not just elective credit. The Indiana College Core transfers to all IN public colleges and universities as well as many of the private schools.

MUST CHOOSE AT LEAST ONE COURSE FROM EACH BOX. Total of 30 minimum credits needed for Indiana College Core.

### Written Communication Credits 3

## ENGL 111 *English Composition\** (S1, AP Language & Comp) (3)  
## ENGL 215 *Rhetoric and Argument\** (S2, AP Lang. & Comp) (3)

### Speaking and Listening 3-6 credits

## COMM 101 *Fundamentals of Public Speaking\** (Comm 101) (3)  
COMM 102 Intro to Interpersonal Communication\*

### Quantitative Reasoning 3-12 credits

MATH 118 Concepts in Mathematics\*  
MATH 123 Quantitative Reasoning  
MATH 135 Finite Math\*  
## MATH 136 *College Algebra\** (Advanced Math, CC) (3)  
## MATH 137 *Trig with Analytic Geometry\** (Pre-Cal) (3)  
MATH 201 Brief Calculus\*  
MATH 202 Brief Calculus II\*  
## MATH 211 *Calculus I\** (AP Calculus AB) (4)  
MATH 212 Calculus II\*  
MATH 221 Calculus for Technology I  
MATH 222 Calculus for Technology II

### Scientific Ways of Knowing 3-12 credits

ASTR 101 Solar System Astronomy\*  
## BIOL 101 *Introductory Biology\** (Biology II) (3)  
BIOL 105 Biology I\*  
BIOL 107 Biology II\*  
BIOL 121 General Biology  
BIOL 211 Microbiology I\*  
##CHEM 101 *Introductory Chemistry\** (Chemistry II) (3)  
##CHEM 105 *General Chemistry I\** (AP Chemistry) (5)  
CHEM 111 Chemistry I  
PHYS 101 *Physics I\** (AP Physics, Algebra-based) (4)  
PHYS 102 Physics II\*  
PHYS 220 Mechanics\*  
PHYS 221 Heat, Electricity, & Optics  
SCIN 100 Earth Science\*  
SCIN 111 *Physical Science\** (Physics II) (3)

### Social & Behavioral Ways of Knowing 3-12credits

ANTH 154 Cultural Anthropology  
ECON 101 Economics Fundamentals\*  
ECON 201 Principles of Economics\*  
ECON 202 Principles of Microeconomics\*  
## HIST 101 *Survey of American History I\** (AP US History) (3)  
## HIST 102 *Survey of American History II\** (AP US History) (3)  
HIST 111 World Civilization I  
HIST 112 World Civilization II  
## POLS 101 *Intro to American Govt. and Politics\** (AP Govt.) (3)  
POLS 211 Introduction to World Politics\*  
PSYC 101 Introduction to Psychology\*  
PSYC 201 Lifespan Development\*  
PSYC 205 Abnormal Psychology\*  
PSYC 240 Human Sexuality\*  
SOC 111 Introduction to Sociology\*  
SOC 164 Multicultural Studies  
SOC 245 Cultural Diversity  
SOC 252 Social Problems\*

### Humanistic & Artistic Ways of Knowing 3-12 credits

ARTH 101 Survey of Art & Culture\*  
ARTH 102 Survey of Art and Culture II\*  
ARTH 110 Art Appreciation\*  
ENGL 202 Creative Writing\*  
## ENGL 206 *Introduction to Literature\**(S1, AP Lit. & Comp) (3)  
ENGL 214 Introduction to Poetry\*  
ENGL 220 Introduction to World Literature\*  
##ENGL 221 *Intro to World Lit.After the Renaissance\**(S2, AP Lit. & Comp.)(3)  
ENGL 222 American Literature to 1865\*  
ENGL 223 American Literature After 1865\*  
FREN 101 French Level I\*  
FREN 102 French Level II\*  
FREN 201 French Level III\*  
FREN 202 French Level IV\*  
HUMA 100 Theatre Appreciation\*  
## HUMA 118 *Music Appreciation\** (Advance Fine Arts) (3)  
PHIL 101 Introduction to Philosophy\*  
PHIL 102 Introduction to Ethics\*  
PHIL 220 Philosophy of Religion\*  
## SPAN 101 *Spanish Level I\** (Spanish 3) (4)  
## SPAN 102 *Spanish Level II\** (Spanish 3) (4)  
## SPAN 201 *Spanish Level III\** (Spanish 4) (3)  
## SPAN 202 *Spanish Level IV\** (Spanish 4) (3)

Total State Transfer General Education Core: 30 minimum credits

\*Core Transfer Library Courses

## MCHS Dual Credit and/or Dual Enrollment Courses with MCHS Course Titles; No fees apply for these classes offered by MCHS and students must meet admission criteria. Students may choose to enroll at ITCC to take additional above listed courses; fees apply and will be billed to the student through ITCC. PASS YOUR ACCUPLACER to earn dual credit; STUDY APP available at <https://www.ivytech.edu/assessmentn/4680.html> or <https://www.ivytech.edu/assessment/12695.html>.

*The following pages outline the course offerings by department. The student should pay close attention to course prerequisites, length of courses (18 or 36 weeks) and credits offered. The courses offered may be changed due to the balancing of class sizes or insufficient student enrollment or faculty changes. The administration will attempt to keep changes to student schedules at a minimum due to these factors.*

## **LANGUAGE ARTS**

### **Language Arts - English Courses**

All courses meet the Core 40/Core 40 with Academic Honors/Core 40 with Technical Honors requirements.

#### **ENGLISH 9 – Grade 9 (IDOE #1002)**

English 9 builds on the language arts instruction that students received in junior high school. English 9 students further develop their use of language as a tool for learning and thinking and as a source of pleasure. Grammar and writing are emphasized, along with reading comprehension and analysis. Literature instruction focuses on universal themes, using examples from contemporary as well as classic genres. Students will be responsible for using personal time for both instructional and recreational reading. The composition component encourages students to synthesize their study of vocabulary and grammar into well-organized essays and documents of various types. Oral communication, technology and research skills are all important components of this class. **Outside reading and homework are required. 2 credit, 2 semester course.**

#### **ENGLISH 9 HONORS / PRE-SEMINAR - Grade 9 (IDOE #1002H)**

English 9 Honors focuses on the close reading, analytical writing, and language skills that have immediate relevance for students across their current courses and that are most essential for their future work in high school, college, and careers. Texts take center stage in the English 9 Honors classroom, where students engage in close, critical reading of a wide range of materials. The course trains the reader to observe the small details within a text to arrive at a deeper understanding of the whole. It also trains the writer to focus on crafting complex sentences as the foundation for writing to facilitate complex thinking and communicate ideas clearly. Students will meet the English 9 standards in this course. MJHS ELA PL will also recommend students. **Outside reading and homework are required. 2 credit, 2 semester course.**

#### **ENGLISH 10 – Grade 10 (IDOE #1004)**

English 10 is a study of language, literature, composition, and oral communication, focusing on literature with an appropriate level of complexity for this grade. 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. Students are required to practice vocabulary and grammar skills in various computer learning programs and track their assignments in a digital calendar system. **Outside reading and homework are required. 2 credit, 2 semester course.**

#### **ENGLISH 10H / AP SEMINAR – Grade 10, (IDOE #1004H)**

AP Seminar is an innovative program that gives students an opportunity to apply critical thinking, collaborative problem-solving, and research skills in a cross-curricular context. AP Seminar is a foundational course that provides students with opportunities to think critically and creatively, research, explore, pose solutions, develop arguments, collaborate, and communicate using various media. Students explore real-world issues through a cross curricular lens, consider multiple points of view to develop deep understanding of complex issues, and connect these issues to their own lives. Literature instruction focuses on universal themes, using examples from contemporary as well as classic genres. Oral communication, technology, and presentation skills are all important components of this class. Teachers typically select 2-4 topics for the course. **Outside reading and homework are required. 2 credit, 2 semester course.**

#### **ENGLISH 11 – Grade 11 (IDOE #1006)**

Through the integrated study of language, literature, composition and speech, English 11 students further develop their use of language as a tool for learning and thinking. Literature instruction includes examples of works by American writers, both classic and contemporary. Students are encouraged to distinguish elements in the literature that make it a reflection of the social, economic and political condition of the times. The Composition component provides students with the opportunities to produce a variety of writings, focusing on using differing methods to support a thesis. Grammar and vocabulary study are synthesized into the writing assignments. Oral communication, technology and research skills are all important components of this class. **Outside reading and homework are required. 2 credit, 2 semester course.**

**ENGLISH 11H / AP RESEARCH – Grade 11, (IDOE #1006H)**

The second course in the Capstone experience allows students to design, plan and conduct a year-long research based investigation on a topic of individual interest. Through this mentored inquiry and investigation, students demonstrate the ability to connect scholarly understanding to real-world problems and issues. Students further their skills acquired in the AP Seminar Course by understanding research methodology, employing ethical research practices, accessing, analyzing, and synthesizing information as they address a research question. Literature instruction focuses on universal themes, using examples from contemporary as well as classic genres. The course culminates in a mentored academic thesis paper of approximately 5000 words and a presentation, performance, or exhibition with an oral defense. **Outside reading and homework are required. 2 credit, 2 semester course.**

**\*\*\* AP ENGLISH LANGUAGE AND COMPOSITION – Grade 11 or 12 (IDOE #1056) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

This course is designed to cover both the recommended guidelines of the College Board and Ivy Tech for an entry-level composition and/or literature course. Students enrolled in this course must be proficient at their grade level per the Indiana Academic Standards and must be motivated to read and write, as this course focuses on terminology and prescribed techniques for critical reading and assessment of presented materials. Critical reading and written assessment will continue, with an additional emphasis on the study of and successful implementation of English grammar, with a goal for a more mature, precise writing approach. **Outside reading and homework are required. 2 credit, 2 semester course. Indiana College Core Course: ENGL 111 & ENGL 215.**

**ENGLISH 12 – Grade 12 (IDOE #1008)**

English 12 continues to refine students' ability and desire to learn and communicate about language and literature. The emphasis on different cultural contexts is intensified in a focus on British literature, emphasizing elements in literature that reflect the social, economic, and political conditions of the times, as well as universal questions and themes. Composition instruction coordinates and synthesizes the vocabulary, grammar, language mechanics and analytical skills acquired during the previous three years of language arts classes. Students complete a research paper and in the process refine their abilities to support a thesis. Oral communication, technology and research skills are all important components of this class. **Outside reading and homework are required. 2 credit, 2 semester course.**

**\*\*\* FUNDAMENTALS OF PUBLIC SPEAKING – Grades 11, 12 (IDOE #1078i) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

Fundamentals of Public Speaking introduces fundamental concepts and skills for effective public speaking, including audience analysis, outlining, research, delivery, critical listening and evaluation, presentational aids, and use of appropriate technology. Prerequisites: Demonstrated competency through appropriate assessment. **1 credit, 1 semester course Indiana College Core Course: COMM 101**

**\*\*\*ENGLISH 111 - Grades 11, 12 (IDOE #1006i)\*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

English Composition is designed to develop students' abilities to think, organize, and express their ideas clearly and effectively in writing. This course incorporates reading, research, and critical thinking. Emphasis is placed on the various forms of expository writing such as process, description, narration, comparison, analysis, persuasion, and argumentation. A research paper is required. Numerous in-class writing activities are required in addition to extended essays written outside of class. **1 credit, 1 semester course Indiana College Core Course: ENGL 111**

**CCR BRIDGE: LITERACY READY - Grade 12 (IDOE#1014)**

This course is an innovative, dynamic course built to help students master the literacy skills needed for three core subject areas - English, social science and science. CCR Bridge Literacy Ready consists of six units, two in history, two in English and two in science. Content of each of the disciplines is at the forefront of the curriculum, while disciplinary literacy skills are emphasized through reading and writing assignments based on the content. The focus is on truly understanding how to read and interpret texts in the discipline on a college level. Students in this course want to be college bound, but have not met the requirements necessary to fulfill that goal. Fulfills an English/Language Arts requirement for all Diploma types. **2 credit, 2 semester course.**

**\*\*\* AP ENGLISH LITERATURE AND COMPOSITION – Grade 12 (IDOE # 1058) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

*English Literature and Composition, Advanced Placement*, is an advanced placement course based on content established by the College Board. An AP English course in Literature and Composition engages students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students consider a work's structure, style, and themes as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. The course includes intensive study of representative works from various genres and periods, concentrating on works of recognized literary merit. A comprehensive description of this course can be found on the College Board AP Central Course Description web page at: <http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html> Outside reading and homework are required. **Prerequisite ENGL 111. 2 credit, 2 semester course. Indiana College Core Courses: ENGL 206 & ENGL 221**



**SPEECH - Grades 10, 11, 12 (IDOE # 1076)**

Speech provides the study of and practice in the basic principles and techniques of effective oral communication. This course includes instruction in adapting speech to different audiences and purposes. Students have opportunities to make different types of oral presentations including: (1) viewpoint, (2) instructional, (3) demonstration, (4) informative, (5) persuasive, and (6) impromptu. Students are given opportunities to express subject matter knowledge and content through creative, analytical, and expository writing, as well as by reading a variety of literary genres related to course content and speaking assignments. This course emphasizes research using technology and careful organization and preparation. Students also practice and develop critical listening skills. **1 credit, 1 semester course.**

**DEBATE - Grades 10, 11, 12 (IDOE # 1070)**

Debate focuses on developing skills for students to become: (1) in-depth researchers, (2) technical and persuasive writers, (3) effective communicators, and (4) perceptive listeners. Students gain an understanding of argumentation and persuasion theories and develop skills in logic and analysis. Students also research topics, organize research, write persuasive cases, and practice public speaking. **1 credit, 1 semester course.**

**CREATIVE WRITING - Grades 10, 11, 12 (IDOE # 1092)**

Creative Writing provides students with ample opportunities to combine literary creativity with the discipline of written discourse. Students write to convey ideas, feelings, moods and visual images. Students become familiar with standard literary elements through the reading and study of published prose and poetry and are taught to use those elements in their own writing. Representative models of literary excellence are studied. Additionally, students learn strategies for evaluating and responding to their own writing and the writing of others in a peer sharing component. In this peer sharing component, students receive specific training in providing constructive, substantive feedback, while role playing as likely readers of each creative work. **1 credit, 1 semester course.**

**FILM LITERATURE – Grades 10, 11, 12 (IDOE # 1034)**

Film Literature exposes students to films from a variety of eras and genres that have shaped the history of filmmaking, from silent to the present. Students will examine various elements of film, ranging from content to structure. This course includes: (1) the impact of film on the ways in which people perceive the human condition, (2) the ways in which the roles of men and women and various ethnic minorities are portrayed, and (3) elements of literature as presented through film. Students complete several writing assignments in which they analyze different elements of literature, genres, historical periods and aspects of cinematography. Suggested to have a recording device for this course. **1 credit, 1 semester course.**

**DRAMATIC LITERATURE - Grades 10, 11, 12 (IDOE # 1028)**

Students in Dramatic Literature read plays, study acting techniques, and present plays in the classroom. Dramatics students should enjoy reading aloud. **1 credit, 1 semester course.**

**ETYMOLOGY - Grades 10, 11, 12 (IDOE # 1060)**

Etymology is a course designed to improve the student's vocabulary through a study of Greek and Latin stems, prefixes and suffixes. The vocabulary of the English language is enhanced. Students discover meanings of words by recognition and interpretation of stem and prefix clues rather than by memorizing meanings. They learn to pronounce words much more readily. Grammar study and essay writing are included. This course may improve PSAT, SAT and ACT scores. **1 credit, 1 semester course.**

**NOVELS - Grades 9, 10, 11, 12 (IDOE # 1042)**

Novels is a course based on the Indiana Academic Standards for English/Language Arts, is a study of the distinct features of the novel, such as narrative and fictional elements of setting, conflict, climax, and resolution, and may be organized by historical periods, themes, or authors. Students examine novels of a given period, such as Victorian, the Modern Period, or Contemporary Literature, and what distinguishes novels from short stories, epics, romances, biographies, science fiction, and others. Students analyze novels by various important authors from the past and present or sets of novels from a specific era or across several eras. **1 credit, 1 semester course.**

## Language Arts – Electives

### DEVELOPMENTAL READING - Grades 9, 10,11,12 (IDOE #1120)

Developmental Reading is a supplemental course that provides students with individualized instruction designed to support success in completing coursework aligned with the Indiana Academic Standards for English/Language Arts focusing on the Reading Standards for Literature and Nonfiction. All students should be concurrently enrolled in an English course in which class work will address all of the Indiana Academic Standards.

**1 credit, 1 semester - repeatable for credit - ELECTIVE CREDIT ONLY.**

### MASS MEDIA - Grades 10, 11, 12 (IDOE # 1084)

This semi-laboratory structured class is a prerequisite for Student Publications and leadership roles on the high school newspaper, *The Madisonian*, and the video newscast show, *Time Out News*. The class is geared for students who like to interact with people, write stories, express opinions in a responsible manner and create graphic packages. To produce exemplary leaders for the two journalism media courses, the class focuses on developing interviewing, writing and editing skills, and examines the legal and ethical aspects of publishing/broadcasting as well as the history of American newspapers, including *The Madison Courier*. Students also closely examine the work of professional journalists as well as learn to judge media critically and understand the use of persuasive language and strategies. Students have the option to attend regional and state journalism conferences with the Student Publications class. In addition, each student serves as a mini-advertising agency for one or more local business/industry. Students who successfully complete the Mass Media class with a B or better may move into Student Publications with approval from journalism adviser.

**Success in this class greatly depends on creativity, team camaraderie, self-motivation, strong leadership skills, and good academic performance, including sound command of grammar and spelling basics. 2 credit, 2 semester course.**

### STUDENT PUBLICATIONS: NEWSPAPER - Grades 10, 11, 12 (IDOE # 1086)

This laboratory-based class is responsible for the production of the video newscast *Time Out News* and the high school newspaper, *The Madisonian*. Students work in teams to determine the media's content, editorial/opinion focus and visual/graphic packaging. To learn from the pros, students also closely examine the work of professional journalists and publications, and serve as a mini-advertising agency for several local businesses/industries. Since the content and visual/graphic packaging of every newscast/newspaper edition changes, the class may be repeated for additional credits. This course fulfills the Fine Arts requirement for the AHD or THD. **Success in this class greatly depends on exemplary writing and/or advertising skills, teamwork, camaraderie and personal commitment. 2 credit, 2 semester course. Fulfills a Fine Arts requirement.**

### STUDENT PUBLICATIONS: YEARBOOK - Grades 10, 11, 12 (IDOE # 1086)

This laboratory structured class is responsible for the creation and production of the high school yearbook. Using a variety of computer based software, the students will determine the publication's design, photographic content, and printed copy. Course content will include instruction and practice in the gathering and analyzing of information, publication layout and design, photography, typography, as well as the business aspects associated with yearbook publication. Examples of amateur and professional photojournalism will also be studied. Students who enroll in this class **must** be able to attend functions during non-school hours to take pictures, gather information, and sell advertising and yearbooks. Success in this class depends on creativity, teamwork, self-motivation, working with professional yearbook personnel, strong interpersonal skills, and the ability to meet multiple deadlines. Prior word processing and photography experience would be helpful. This course fulfills the Fine Arts requirement for the AHD or THD. Student interviews are required. **2 credit, 2 semester course.**

## Language Arts - World Languages

All courses meet the Core 40, Core 40 with Academic Honors, and Core 40 with Technical Honors requirement.

Three years of one world language or two years each of two world languages meet Academic Honors Diploma requirement. **Students should expect to study a minimum of 15-30 minutes a day outside of the classroom as well as practice speaking the language aloud inside the classroom to achieve success in foreign language.**

### FRENCH I - Grades 9, 10, 11, 12 (IDOE #2020)

French 1 provides instruction enabling students to discuss the many reasons for learning languages and to develop an understanding of the people who speak them. Students are able to apply effective strategies for language learning and show a willingness to experience various aspects of the Francophone culture. The course provides students with opportunities to respond to and give oral directions and commands and to make routine requests in the classroom and in public places; to understand and use appropriate forms of address in courtesy expressions and be able to tell about daily routines and events; to ask and answer simple questions and participate in brief guided conversations related to their needs and interest; to read isolated words and phrases in a situational context, such as menus, signs, and schedules; to comprehend brief written directions and information; to read short narrative texts on simple topics; and to write familiar words and phrases in appropriate contexts and respond in writing to various stimuli. Additionally, students learn about nonverbal communication, such as gestures and body language; about awareness of current events in the Francophone culture; the major holidays and geographical features of the Francophone countries being studied; greeting and leave taking behaviors in a variety of social situations; the appropriate way to respond to introductions and use courtesy behaviors; and appropriate etiquette in a variety of social settings. **2 credit, 2 semester course.**

**FRENCH II - Grades 10, 11, 12 (IDOE #2022)**

French II enables students to participate in classroom and extracurricular activities related to the French language as well as to participate in conversations dealing with daily activities and personal interests. Students learn to ask questions regarding routine activities; participate in conversations on a variety of topics; relate a simple narrative about a personal experience or event; interact in a variety of situations to meet personal needs, such as asking permission, asking for or responding to an offer of help, and expressing preferences pertaining to everyday life; understand main ideas and facts from simple texts over familiar topics; read aloud with appropriate intonation and pronunciation; and write briefly in response to given situations, for example postcards, personal notes, phone messages, and directions, as well as write letters using culturally appropriate format and style. Additionally, students become familiar with major geographical features, historical events, and political structures of Francophone countries as well as with different aspects of the culture, including the visual arts, architecture, literature and music, using French where appropriate; they are able to extend and respond to hospitality as a host or a guest and to be aware of time expectations, such as arriving for appointments and social engagements..

**Prerequisite: Grade C or higher in French I with teacher recommendation. 2 credit, 2 semester course.**

**FRENCH III - Grades 11, 12 (IDOE #2024)**

French III enables students to understand and appreciate other cultures by comparing social behaviors and values of people using French. Students are willing to initiate and participate in discussions concerning the Francophone cultures. In addition, students are able to respond to factual and interpretive questions and interact in a variety of social situations, such as expressing regrets, condolences, and complaints, and using more than rote memory formula phrases; read for comprehension from a variety of authentic materials, such as advertisements in newspapers and magazines, and cartoons and personal correspondence; read short literary selections of poetry, plays, and short stories; complete authentic forms and documents and take notes that require familiar vocabulary and structures; write paraphrases, summaries, and brief compositions; describe different aspects of the culture, using French where appropriate, seek help in a crisis situation and participate appropriately at special family occasions. **Prerequisite: Grade C or higher in French II with teacher recommendation.. 2 credit, 2 semester course.**

**FRENCH IV - Grades 11, 12 (IDOE #2026)**

French IV enables students to participate in classroom and extra-curricular activities related to the French language, such as taking leadership roles in language clubs. This course also enables students to respond to factual and interpretive questions, interact in complex social situations, and express opinions and make judgments; give presentations on cultural topics including: traditions, historical and contemporary events, and major historical and artistic figures; paraphrase or restate what someone else has said; read for comprehension from a variety of longer authentic materials, such as newspapers and magazine articles, novels (Le Petit Prince by Antoine de Saint Exupery) and essays, as well as make judgments about what is read; write well-organized compositions on a given topic; and begin using French creatively in writing simple poetry and prose. Students also learn to adjust speech appropriate to the situation and audience and to participate appropriately in a variety of specific circumstances which could include public meetings, attending concerts, and using public transportation. **2 Credits. Prerequisite: Grade C or higher in French III with teacher recommendation.. 2 credit, 2 semester course.**

**AP FRENCH LANGUAGE AND CULTURE - Grades 11, 12 (IDOE #2032)**

*French Language, Advanced Placement* is based on content established by the College Board Emphasizing the use of the French language for active communication, the AP French Language course has as its objectives the development of Spoken Interpersonal Communication, Written Interpersonal Communication, Audio, Visual, and Audiovisual Interpretive Communication, Written and Print Interpretive Communication, Spoken Presentational Communication, Written Presentational Communication, . Course content might best reflect interests shared by the students and the teacher, e.g. the arts, current events, sports, etc. Students develop language skills that are useful in themselves and can be applied to various activities and disciplines rather than being limited to any specific body of subject matter. Extensive practice in the organization and writing of compositions should also be emphasized. A comprehensive description of this course can be found on the College Board AP Central Course Description web page.

**Prerequisite: Grade C or higher in French III with teacher recommendation . 2 credit, 2 semester course.**

**GERMAN I - Grades 9, 10, 11, 12 (IDOE #2040)**

German I provides instruction that enables students to discuss the reasons for learning German and to develop an understanding of German-speaking people. Students are able to apply effective strategies for learning a foreign language and show a willingness to experience various aspects of Germanic culture. Students have the opportunity to respond to and give oral directions and commands, make routine requests, use appropriate forms of address, tell about daily events and routines, and ask and answer simple factual questions. Students will be able to read menus, signs, and schedules, comprehend brief written directions and information, and read short narrative texts. They will also be able to write familiar words and phrases in appropriate contexts. Students will develop a basic level of cultural literacy about such aspects as etiquette, celebrations, current events, and history. Students are required to utilize a virtual textbook to learn material, track assignments, and complete assignments on the computer. Students are required to participate in individual, partner, and group speaking assignments. **2 credit, 2 semester course.**

### **GERMAN II - Grades 10, 11, 12 (IDOE #2042)**

German II reviews material from level one and introduces new language and cultural material. Students will be able to ask and answer questions regarding routine activities and relate simple narratives. They will be able to interact in a variety of situations to meet personal needs such as asking permission, asking for or responding to an offer of help, and expressing preferences pertaining to everyday life. Students will read simple texts over familiar topics and be able to respond in writing and speech to the information there. Students will be able to read aloud with correct pronunciation and write briefly in authentic situations such as email, postcards, lists, directions, letters, and personal notes. Students begin to compare and contrast the Germanic culture with their own. They now will communicate thoughts, ideas, and basic information in the past, as well as the future, demonstrating a cultural awareness of time expectations. Students will become more culturally literate, demonstrating familiarity with Germanic geography, history, philosophy, art, and music. They will also demonstrate proficiency in everyday cultural situations such as host, guest, interviewer, or interviewee. Students are required to utilize a virtual textbook to learn material, track assignments, and complete assignments on the computer. Students are required to participate in individual, partner, and group speaking assignments. **Prerequisite: Grade C or higher in German I with teacher recommendation. 2 credit, 2 semester course.**

### **GERMAN III - Grades 11, 12 (IDOE #2044)**

German III reviews material from level II and requires students to expand their reading and speaking abilities. Students will be able to demonstrate speaking proficiency in such situations as asking for help, participating in special family occasions, and expressing regret or acceptance, complaint or praise. They will be able to read intermediate literary and authentic expository texts for comprehension and be able to respond appropriately in well-organized reflective journals and essays. Students will read stories, plays, and poems and write creatively in response. They will be able to describe various aspects of the culture, in German where appropriate, such as major historical events, political structures, value systems, visual arts, architecture, literature, and music. Students will be able to speak extemporaneously using more than rote memory formula phrases. Students are required to utilize a virtual textbook to learn material, track assignments, and complete assignments on the computer. Students are required to participate in individual, partner, and group speaking assignments. **Prerequisite: Grade C or higher in German II with teacher recommendation. 2 credit, 2 semester course.**

### **GERMAN IV - Grades 11, 12 (IDOE #2046)**

German IV will continue offering students the opportunity to demonstrate cultural awareness and proficiency. Students will have the opportunity to demonstrate leadership in German Club and in teaching beginning students songs, dances, and simple conversations. Students will be able to adjust their speech appropriate to the formality or informality of the social situation and participate in such authentic cultural contexts as email, public meetings, attending concerts and plays, and using public transportation. Students will be aware of the relationship between various art forms in at least one major historical period and of the major literary, musical, and artistic periods and genres of Germanic culture. Students will be able to respond to factual and interpretive questions, interact in complex social situations, express opinions, and make judgments. They will give presentations on cultural topics including traditions, historical events, current events, and major historical and artistic figures. Students will be able to paraphrase what they have heard or read, write well-organized compositions, and write creatively in poetry and prose. Students will read for comprehension a variety of longer authentic materials, such as newspaper and magazine articles, novellas, essays, and plays. This course may be taken as an independent study course. **Prerequisite: Grade C or higher in German III with teacher recommendation. 2 credit, 2 semester course.**

### **AP GERMAN LANGUAGE AND CULTURE - Grades 11, 12 (IDOE #2052)**

AP German Language and Culture is a course established and copyrighted by the College Board and follows the College Board course guidelines for AP German Language and Culture. The course prepares students to be successful on the AP German Language and Culture exam. The course emphasizes understanding and being understood by others by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. To best facilitate the study of language and culture, the course is taught almost exclusively in German. The course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).

**Prerequisite: Grade C or higher in German III with teacher recommendation. 2 credit, 2 semester course.**

### **SPANISH I - Grades 9, 10, 11, 12 (IDOE #2120)**

Spanish I enables students to discuss the reasons for learning Spanish and to develop an understanding of Spanish-speaking people and their culture. This course introduces the Spanish language and Hispanic culture to students and enables students to apply effective strategies for learning Spanish. Emphasis is placed on developing the skills of listening, speaking, reading, and writing within a cultural context. Students will be able to respond to and give oral directions and commands, make and answer requests, and ask and answer simple questions. They will be able to understand words and phrases in situational contexts, read short texts on simple topics, and write appropriate responses within situational contexts. As a result of this course, students will have basic vocabulary and structures for minimal communication. They will also have a beginning Hispanic cultural literacy, including etiquette and nonverbal communication, celebrations, current events, history, art, literature, and music. Students are required to do presentations, quizzes, and other activities orally in Spanish. Students should expect to devote at least 15 - 30 minutes each day outside of class for Spanish studies. Students should always check Google Classroom for assignments. **2 credit, 2 semester course.**

**SPANISH II - Grades 9, 10, 11, 12 (IDOE #2122)**

Spanish II enables students to participate in conversations dealing with daily activities and personal interests in Spanish. Emphasis is placed on communication in written and spoken Spanish within a cultural context. Students will be able to ask and answer questions regarding routine activities and relate simple narratives about events or personal experiences. Some skills students will acquire include asking permission, asking for or responding to an offer of help, expressing preferences, and responding politely to inquiries. Students will learn more advanced vocabulary and grammatical structures after an intensive review of beginning material, and will be able to write briefly in various situational contexts. Students will become familiar with Spanish-speaking countries and their history, geography, literature, and music. As a result of this course, students will have a more complete understanding of Spanish language and culture and will be able to comport themselves in such cultural contexts as host, guest, exchange student, visitor, interviewer, and interviewee. Students are required to do presentations, quizzes, and other activities orally in Spanish. Students should expect to devote at least 15 - 30 minutes each day outside of class for Spanish studies. Students should always check Google Classroom for assignments. **Prerequisites: Grade C or higher in Spanish I with teacher recommendation. 2 credit, 2 semester course.**

**\*\*\* SPANISH III - Grades 10, 11, 12 (IDOE #2124) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

This course introduces students to intermediate Spanish. There is an increased emphasis on communication in written and spoken Spanish within a cultural context, providing students with opportunities to understand and appreciate other cultures by comparing social behaviors and values of people in Spanish. Students will develop intermediate communication skills such as seeking help in a crisis situation, participating in special family occasions, responding to factual and interpretive questions, and interacting in a variety of social situations. They will be able to express regret, complaint, condolence, and enthusiasm. Students will be able to write brief compositions and complete authentic forms and documents. They will be able to read short literary selections such as stories, poetry and plays in Spanish. As a result of this course, students will be able to communicate in the Spanish language on a more intermediate level in both speaking and writing. Students are required to do presentations, quizzes, and other activities orally in Spanish. Students should expect to devote at least 15 - 30 minutes each day outside of class for Spanish studies. Students should always check Google Classroom for assignments. **Prerequisites: Grade C or higher in Spanish II with teacher recommendation. 2 credit, 2 semester course Indiana College Core Course: SPAN 101 & 102**

**\*\*\*SPANISH IV - Grades 11, 12 (IDOE #2126) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

Introduces the student to an advanced level of Spanish. Emphasis is placed upon the Spanish language as a means of communication to respond to factual and interpretive questions, interact in complex social situations, express opinions, and make judgments. Students will also be able to use their own active speaking vocabulary to paraphrase what they have read or heard in Spanish. Students will read unfamiliar material written in Spanish for comprehension from a variety of longer authentic materials such as articles, novels, essays, and plays. Students will give presentations on Spanish artists, poets and writers and recognize their contributions to the arts. Students will complete an in-depth study of Spanish grammar and demonstrate their writing abilities in well-organized compositions and ongoing journal entries. Students will also write creatively in poetry and prose. Demonstrating deeper cultural literacy, students will be able to adjust speech to situation and audience and participate appropriately in specific situational contexts such as using public transportation or attending cultural events. Students will have a well-developed awareness of the relationship between various art forms in at least one major historical period, and will be aware of the major literary, musical, and artistic periods in at least one Spanish-speaking culture. Students are required to do presentations, quizzes, and other activities orally in Spanish. Students should expect to devote at least 15 - 30 minutes each day outside of class for Spanish studies. Students should always check Google Classroom for assignments. **Prerequisites: Grade C or higher in Spanish III with teacher recommendation. 2 credit, 2 semester course Indiana College Core Course: SPAN 201 & 202**

**AP SPANISH LANGUAGE - Grades 11, 12 (IDOE #2132)**

*Spanish Language, Advanced Placement* is a course based on content established by the College Board. Emphasizing the use of the Spanish language for active communication, the AP Spanish Language course has as its objective the development of advanced listening comprehension, reading without the use of a dictionary, expanded conversational skills, fluent and accurate written expression, and strong command of vocabulary and structure of the Spanish language. Course content might best reflect interests shared by the students and the teacher, e.g. the arts, current events, sports, etc. The AP Spanish Language course seeks to develop language skills that are useful in themselves and that can be applied to various activities and disciplines rather than being limited to any specific body of subject matter. Extensive practice in the organization and writing of compositions *Indiana Department of Education 26 October 31, 2012 State Approved Course Titles & Descriptions High School* should also be emphasized. A comprehensive description of this course can be found on the College Board AP Central Course Description web page. Students are required to do presentations, quizzes, and other activities orally in Spanish. Students should expect to devote at least 15 - 30 minutes each day outside of class for Spanish studies. Students should always check Google Classroom for assignments.

**Prerequisite: Grade C or higher in Spanish III with teacher recommendation. 2 credit, 2 semester course.**

## **MATHEMATICS**

### **ALGEBRA I – Grades 9, 10, 11, 12 (IDOE #2520)**

Algebra I is a course which enables the student to develop skills which are necessary for carrying out algebraic operations and to develop an awareness of the structure of mathematics. Algebra I provides a course of study which will serve as a foundation for the further study of mathematics while at the same time help the students develop an appreciation of mathematics and its value as part of their general education for everyday living. Meets Academic Honors Diploma and Core 40 requirements. **2 credit, 2 semester course.**

### **GEOMETRY – Grades 9, 10, 11, 12 (IDOE #2532)**

The study of geometry utilizes an axiomatic approach. Students will experience and gain proficiency with inductive and deductive reasoning. The course content includes the study of planes, solid figures, circles, triangles, and polygons, and the relationships between angles and sides of polygons. An attempt is made to show the applications of these to everyday use. Meets Academic Honors Diploma and Core 40 requirements. **Prerequisite: Algebra I. 2 credit, 2 semester course.**

### **GEOMETRY HONORS / PRE-AP - Grade 9, 10 (IDOE # 2532H)**

Although the content of this course will typically be that of a Geometry course, emphasis will be placed on the rigorous preparation for advanced mathematics. Exercises more challenging than those typically found in Geometry will be emphasized, including formal and indirect proofs. Term projects and/or class presentations by students will be expected. Meets Academic Honors Diploma and Core 40 requirements. **Prerequisite: B- or better in Algebra I or teacher recommendation. 2 credit, 2 semester course.**

### **ALGEBRA II - Grades 10, 11, 12 (IDOE #2522)**

This course helps the student to further his/her understanding of Algebra I. It includes a study of complex numbers, the function concept, skill development in applying algebraic concepts, recognition of the role of inductive reasoning and an appreciation of the need for a precise language of mathematics. Meets Academic Honors Diploma and Core 40 requirements. **Prerequisite: Algebra I. 2 credit, 2 semester course.**

### **ALGEBRA II HONORS / PRE-AP - Grade 10, 11 (IDOE #2522H)**

Although the content of this course will typically be that of an Algebra II course, emphasis will be placed on the rigorous preparation for advanced mathematics. Exercises more challenging than those typically found in Algebra II will be emphasized. Computer exercises may be utilized as time permits. Term projects and/or class presentation by students will be considered. Meets Academic Honors Diploma and Core 40 requirements. **Prerequisite: B- or better in Geometry or teacher recommendation. 2 credit, 2 semester course.**

### **CCR BRIDGE MATH READY- Grades 11,12 (IDOE #2514)**

This class is intended to help students pass a college placement test that would allow them to begin “credit bearing” math classes when they enter college. Topics include: Algebraic Expressions, Equations, Measurements and Proportions, Linear Functions, Linear Systems of Equations, Quadratic Functions, Exponential Functions, and Summarizing and Interpreting Data. A major component of the class will be the applications of the above topics. There will be multiple “hands-on” and group projects required. Prerequisite: Algebra II. This course is NOT open for someone who has already earned credit in a college level class. **2 credit, 2 semester course.**

### **\*\*\* PRE-CALCULUS HONORS / PRE-AP (IDOE #2564) & TRIGONOMETRY (IDOE #2566) – Grades 10, 11, 12 \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

The purpose of these courses is to introduce the students to the major concepts necessary to prepare them for a college level calculus class. The following concepts will be discussed at a deeper level than regular Pre-Calculus: 1. Relations and Functions, 2. Logarithmic and Exponential Functions, 3. Sequences and Series, 4. Data Analysis, 5. Trigonometry in Triangles, 6. Trigonometric Functions, 7. Trigonometric Identities, 8 Application of Limits. Meets Academic Honors Diploma and Core 40 requirements. **Prerequisite: C or better in Algebra II or Teacher recommendation. 2 credit, 2 semester course Indiana College Core Course: MATH 136 & 137**

### **\*\*\* AP CALCULUS AB - Grade 11, 12 (IDOE #2562) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

The purpose of AP Calculus AB is to introduce the students to the concepts being taught during a first year college calculus class. The following concepts will be discussed: 1. Limits and the definition derived from limits, 2. Differential Calculus: Including all the rules of differentiation, properties of the derivative, and the basic applications of the derivative, 3. Integral Calculus: Including the definition and basic application of the integral. **Note:** The student may take the AP Calculus AB national test in the spring. **Note: Ivy Tech Dual Credit Available in M211 - 4 Credits. Prerequisite: C or better in Pre-Calculus or Teacher Recommendation. Indiana College Core Course: MATH 211**

### **\*\*\* AP CALCULUS BC - Grade 11, 12 (IDOE #2572) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

The purpose of AP Calculus BC is to introduce the students to the same concepts being taught in AP Calculus AB with the addition of the following concepts: 1. Basic Vector Calculus, 2. Basic Polar Coordinate Calculus, 3. More rules of integration, 4. Convergent and divergent infinite series, 5. Taylor Polynomials. **Note: Ivy Tech Dual Credit Available in M211 - 4 Credits. Prerequisite: B or better in Pre-Calculus or Teacher Recommendation. Co-Requirement: Calculus Math Lab. 2 credit, 2 semester course Indiana College Core Course: MATH 211**

### **CALCULUS BC MATH LAB – Grade 11, 12 (IDOE #2560)**

This is an elective course and is designed to be taken to support of AP CALCULUS BC course. **Not a Core 40 or Academic Honors Diploma course. 2 credit, 2 semester course.**

### **AP STATISTICS – Grade 11, 12 (IDOE #2570)**

The purpose of this AP Statistics is to introduce the students to the major concepts and tools for collecting, analyzing, and drawing conclusion from data. The students will be exposed to four broad conceptual themes: 1. Exploring Data: Describing patterns and departure from patterns, 2. Sampling and Experimentation: Planning and conducting a study, 3. Anticipating Patterns: Exploring random phenomena using probability and simulation, 4. Statistical Inference: Estimating population parameters and testing hypotheses. Note: AP Statistics CAN be taken concurrently with Honors Pre-Calculus / Pre-Calculus; AP Statistics CANNOT be taken between Algebra II and Pre-Calculus **Prerequisites: Successful completion of either Honors Pre-Calculus or Pre calculus OR completed Honors Algebra II or Algebra II with a B or higher. 2 credit, 2 semester course.**

## **SCIENCE**

All courses *except for Introduction to Health Science Careers* meet the Core 40, Core 40 with Academic Honors, and Core 40 with Technical Honors diploma requirements for science.

### **EARTH & SPACE SCIENCE – Grades 9, 10, 11, 12 (IDOE # 3044)**

This course is an investigative study of the four major branches of earth/space science: geology, oceanography, meteorology and astronomy. Topics of study will include history of the earth, earth processes, rocks and minerals, an investigation of the ocean as well as the atmosphere, planetary motion, and general topics of our galaxy. Careers in earth/space science will also be considered. Students interested in studying the dynamic forces affecting the earth should take this course. **2 credit, 2 semester course.**

### **BIOLOGY – Grades 9, 10, 11, 12 (IDOE # 3024)**

This course is based on laboratory investigations that include a study of the structures and functions of living organisms and their interactions with the environment. At a minimum, students enrolled in Biology I explore the structure and function of cells, cellular processes, and the interdependencies of organisms within populations, communities, ecosystems, and the biosphere. Students work with concepts, principles, and theories of the living environment. In addition, students enrolled in this course are expected to: (1) gain an understanding of the history and development of biological knowledge, (2) explore the uses of biology in various careers, and (3) investigate biological questions and problems related to personal needs and societal issues. **2 credit, 2 semester course.**

### **BIOLOGY HONORS - Grades 9, 10, 11, 12 (IDOE #3024)**

This course is based on laboratory investigations that include a study of the structures and functions of living organisms and their interactions with the environment. At a minimum, students enrolled in Biology I explore the structure and function of cells, cellular processes, and the interdependencies of organisms within populations, communities, ecosystems, and the biosphere. Students work with concepts, principles, and theories of the living environment. In addition, students enrolled in this course are expected to: (1) gain an understanding of the history and development of biological knowledge, (2) explore the uses of biology in various careers, and (3) investigate biological questions and problems related to personal needs and societal issues. Expect approx. 1-2 hours outside of class per week for this class. **Prerequisite: Earning an A or B in Algebra I. 2 credit, 2 semester course.**

### **\*\*\* BIOLOGY II – Grades 10, 11, 12 (IDOE # 3026)\*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

This course focuses on extended laboratory and literature investigations into the internal structures, functions, and processes of living organisms with an emphasis on vertebrate anatomy and physiology. Biology II is a dual-credit course. Three undergraduate credit hours may be earned through Ivy Tech Community College for Introductory Biology/ BIO 101. You must meet the entrance criteria for Ivy Tech. See your counselor for details. Outside regular hours are expected for this course. **Prerequisite: Biology I and Chemistry I, or Integrated Chemistry/Physics. 2 credit, 2 semester course Indiana College Core Course: BIOL 101**

### **AP BIO 3020 AP Biology (L)**

AP Biology is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. The major themes of the course include: The process of evolution drives the diversity and unity of life, Biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis, Living systems store, retrieve, transmit and respond to information essential to life processes, Biological systems interact, and these systems and their interactions possess complex properties. Recommended Grade: 11, 12 Required Prerequisites: none Recommended Prerequisites: Biology I and Chemistry I Credits: 2 semester course, 1 credit per semester Counts as a science course for all diplomas Qualifies as a quantitative reasoning course Laboratory course

### **INTEGRATED CHEMISTRY & PHYSICS - Grades 9,10,11,12 (IDOE # 3108)**

This course introduces the fundamental concepts of scientific inquiry, the structure of matter, chemical reactions, forces, motion, and the interactions between energy and matter. This course will serve students as a laboratory-based introduction to possible future coursework in chemistry or physics while ensuring a mastery of the basics of each discipline. The ultimate goal of the course is to produce scientifically literate citizens capable of using their knowledge of physical science to solve real-world problems and to make personal, social, and ethical decisions that have consequences beyond the classroom walls. **2 credit, 2 semester course.**

**CHEMISTRY I - Grades 9, 10, 11, 12 (IDOE # 3064)**

This course is a math-based science course that will focus on the following core topics: properties and states of matter, atomic structure, bonding, chemical reactions, solution chemistry, behavior of gases and organic chemistry. Students will study the uses of chemistry in various careers and the application of chemistry by conducting investigations according to accepted procedures. **Prerequisites: Algebra I (B- or better or teacher recommendation) and Biology I. 2 credit, 2 semester course.**

**CHEMISTRY I HONORS - Grade 10, 11, 12 (IDOE # 3064H)**

The content of this course will parallel that of the regular Chemistry I course. Topics will also focus on extended laboratory and literature investigations of the nature of chemical changes and the role of energy in those changes. Students will explore the uses of chemistry in various careers and conduct extended laboratory investigations according to accepted procedures.

**Prerequisites: Algebra I (B- or better or teacher recommendation), Biology I, Geometry. 2 credit, 2 semester course.**

**\*\*\* Chemistry II - Grades 10, 11, 12 (IDOE # 3066) \*\*\*DUAL CREDIT OPPORTUNITY\*\*\***

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. **Prerequisite: Chemistry I, Algebra II. Indiana College Core Course: CHEM 101**

**\*\*\*AP CHEMISTRY - Grades 10, 11, 12 (IDOE # 3060) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

*Chemistry, Advanced Placement* is a course based on the content established by the College Board. The content includes: (1) structure of matter: atomic theory and structure, chemical bonding, molecular models, nuclear chemistry; (2) states of matter: gases, liquids and solids, solutions; and (3) reactions: reaction types, stoichiometry, equilibrium, kinetics and thermodynamics. A comprehensive description of this course can be found on the College Board AP Central Course Description web page at: <http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html>. **Prerequisite: Pre-Calc, Chemistry I. 2 credit, 2 semester course. Indiana College Core Course: CHEM 105**

**PLTW - PRINCIPLES OF THE BIOMEDICAL SCIENCES - Grades 9, 10, 11, 12 (IDOE # 5218)**

PLTW Principles of the 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. **Prerequisites: Algebra I or concurrent enrollment. 2 credit, 2 semester course.**

**PLTW – HUMAN BODY SYSTEMS - Grades 10, 11, 12 (IDOE # 5216)**

PLTW 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 body 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. **Prerequisites: Principles of the Biomedical Sciences. 2 credit, 2 semester course.**

**PLTW – MEDICAL INTERVENTIONS – Grades 11, 12 (IDOE # 5217)** PLTW Medical Interventions is a course that studies medical practices including interventions to support humans in treating disease and maintaining health. Using a project-based learning approach, students will investigate various medical interventions that extend and improve quality of life, including gene therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Students will also study the design and development of various interventions including vascular stents, cochlear implants, and prosthetic limbs. Lessons will cover the history of organ transplants and gene therapy with additional readings from current scientific literature addressing cutting edge developments. Using 3-D imaging software, students will design and build a model of a therapeutic protein. **Prerequisites: Human Body Systems. 2 credit, 2 semester course.**

**\*\*\*PLTW BIOMEDICAL INNOVATION – Grade 12 (IDOE # 5219) \*\*\* POTENTIAL DUAL CREDIT OPPORTUNITY\*\*\***

PLTW Biomedical Innovation is a capstone course designed to give students the opportunity to design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. Students have the opportunity to work on an independent project and may work with a mentor or advisor from a university, hospital, physician’s office, or industry. Throughout the course, students are expected to present their work to an adult audience that may include representatives from the local business and healthcare community. **Prerequisites: Medical Interventions. 2 credit, 2 semester course.**

**\*\*\*MEDICAL TERMINOLOGY - Grades 11, 12 (IDOE # 5274) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

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. **2 credit, 2 semester course. Counts as Directed Elective or Elective for all diplomas.**

**\*\*\*ANATOMY & PHYSIOLOGY – Grades 11, 12 (IDOE # 5276)\*\*\*DUAL CREDIT OPPORTUNITY\*\*\***

Students will investigate concepts related to health Science, with emphasis on interdependence of systems and contributions of each system to the maintenance of a healthy body. 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. **Prerequisites: Chemistry 1 or Chemistry 1 Honors. 2 credit, 2 semester course.**

**ENVIRONMENTAL SCIENCE - Grades 10, 11, 12 (IDOE # 3010)**

Environmental Science is an interdisciplinary course that integrates biology, earth science, chemistry, and other disciplines. Students enrolled in this course conduct in-depth scientific studies of environmental systems, flow of matter and energy, natural disasters, environmental policies, biodiversity, population, pollution, and natural and anthropogenic resource cycles. Students formulate, design, and carry out laboratory and field investigations as an essential course component. Students completing Environmental Science, acquire the essential tools for understanding the complexities of national and global environmental systems. **Prerequisites: Two credits science coursework. 2 credit, 2 semester course. Fulfills a science (life) course requirement for all diplomas.**

**AP ENVIRONMENTAL SCIENCE - Grades 11, 12 (IDOE # 3012)**

AP Environmental Science is a course based on content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. Students enrolled in AP Environmental Science investigate the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. **Prerequisites: Biology and Chemistry. 2 credit, 2 semester course. Counts as a science course for all diplomas. Qualifies as a quantitative reasoning course.**

**PHYSICS I - Grades 10, 11, 12 (IDOE # 3084)**

Physics I is a course focused on the following core topics: constant velocity; constant acceleration; forces; energy; linear momentum in one dimension; simple harmonic oscillating systems; mechanical waves and sound; simple circuit analysis. 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.

**Prerequisite: Biology I, Chemistry I, Algebra II or Integrated Chemistry/Physics. 2 credit, 2 semester course .**

**\*\*\*PHYSICS II - Grades 10, 11, 12 (IDOE # 3086)\*\*\*DUAL CREDIT OPPORTUNITY\*\*\***

Physics II is an extended laboratory, field, and literature investigations-based course. Students enrolled in Physics II investigate physical phenomena and the theoretical models that are useful in understanding the interacting systems of the macro- and microcosms. Students extensively explore the unifying themes of physics, including such topics and applications of physics as: energy and momentum in two dimensions; temperature and thermal energy transfer; fluids; electricity; simple and complex circuits; magnetism; electromagnetic induction; geometric optics; particle and wave nature of light; modern physics. Use of laboratory activities aimed at investigating physics questions and problems concerning personal needs and community issues related to physics are embedded within the course. **Prerequisites: Chemistry 1 Honors and completed or concurrently enrolled in Pre-cal / Trig. 2 credit, 2 semester course Indiana College Core Course: SCIN 111**

**\*\*\*AP PHYSICS – Grade 10, 11, 12 (IDOE # 3080) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

AP Physics 1 is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. AP Physics 1: Algebra-based is equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; mechanical waves and sound. It will also introduce electric circuits.

**Prerequisites: Biology I, Chemistry I, Algebra II and Pre-Calc. Concurrently taking Calculus. 2 credit, 2 semester course.**

**\*\*\* ADVANCED LIFE SCIENCE, ANIMALS – Grades 10, 11,12 (IDOE # 5070) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

This course meets a CORE 40 science requirement for the Academic Honors Diploma and Core 40 Diploma. This is a hands on laboratory based class. Students will learn animal growth, development and physiology as it pertains to agricultural science. Topics covered include taxonomy, organ systems, genetics, and ecology. **Prerequisite: Biology 1, Chemistry 1 or ICP. This course earns Ivy Tech Credit and is in the Animal Science Pathway . 2 credit, 2 semester course.**

**\*\*\* ADVANCED LIFE SCIENCE:FOODS - Grades 11, 12 (IDOE # 5072) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

Advanced Life Science: Foods provides students with opportunities to understand how biology, chemistry and physics principles apply to the composition of foods, the nutrition of foods, food and food product development, food processing, food safety and sanitation, food packaging and food storage. Students completing this course will be able to apply the principles of scientific inquiry to solve problems related to biology, physics and chemistry in the context of highly advanced industry applications of foods in the area of advanced life science in foods. **Prerequisite: Biology 1, Chemistry 1 or ICP. This course earns Ivy Tech Credit and is in the Food Science Pathway . 2 credit, 2 semester course.**

## **SOCIAL STUDIES**

All courses meet Core 40, Core 40 with Academic Honors, and Core 40 with Technical Honors diploma requirements.

### **WORLD HISTORY/CIVILIZATION – Grade 10 (IDOE # 1548)**

This course is a survey of World History which places primary emphasis on the development of world civilization. The course will cover non-western as well as western history. Using a chronological and topical approach, students will trace mankind's progress from prehistoric time to the present. Students will trace how geography affected the development of civilizations. Current problems of contemporary society will be discussed in relation to historical development of modern nations. Open to 10, 11, 12 if credit needed. **2 credit, 2 semester course.**

### **AP WORLD HISTORY Grade 10 (IDOE # 1612)**

World History, Advanced Placement is a course that provides students with the content established by the College Board. The course will have a chronological frame from the periods 8000 B.C.E. to the present. AP World History focuses on five overarching themes: Interaction Between Humans and the Environment, Development and Interaction of Cultures, State-Building, Expansion, and Conflict, Creation, Expansion, and Interaction of Economic Systems, Development and Transformation of Social Structures. A comprehensive description of this course can be found on the College Board AP Central Course Description web page at: <http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html>  
**2 credit, 2 semester course.**

### **UNITED STATES HISTORY - Grade 11 (IDOE # 1542)**

This course meets a state graduation requirement. The major emphasis is on the history of our nation from Reconstruction to the present day. A conceptual as well as a chronological approach is followed for the course. United States Geography and its relationship to historical events is included.  
**2 credit, 2 semester course.**

### **\*\*\*AP UNITED STATES HISTORY- Grade 11 (IDOE # 1562) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

United States History, Advanced Placement is a course that provides students with the content established by the College Board. You will be asked to question, analyze, and challenge at times what you have learned and try to examine the past from different perspectives. The goal of questioning is to continue to improve in the areas of historical inquiry and analysis in order to understand how people in the past understood the issues and events occurring during their lifetime, to increase your ability to think critically as well as historically, and to improve your ability to express your ideas in oral and written communication. **2 credit, 2 semester course Indiana College Core Course: HIST 101 & 102**

### **AP PSYCHOLOGY - Grades 11, 12 (IDOE # 1558)**

Psychology, Advanced Placement is a course based on content established by the College Board. This course is designed to introduce students to the systematic and scientific study of the behavior and mental processes. Topics include: (1) history and approaches, (2) research methods, (3) biological bases of behavior, (4) sensation and perception, (5) states of consciousness, (6) learning, (7) cognition, (8) motivation and emotion, (9) developmental psychology, (10) personality, (11) testing and individual differences, (12) abnormal psychology, (13) treatment of psychological disorders, and (14) social psychology. A comprehensive description of this course can be found on the College Board AP Central Course Description web page at: <http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html> **2 credit, 2 semester course.**

### **UNITED STATES GOVERNMENT - Grade 12 (IDOE # 1540)**

Government is an in-depth study of federal, state, and local government. There is specific emphasis on current issues as they affect individual rights. Opportunities for individualized work are given. Observation of local government is encouraged. **1 credit, 1 semester course.**

### **\*\*\*AP UNITED STATES GOVERNMENT AND POLITICS - Grade 12 (IDOE # 1560) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

Topics include: (1) constitutional underpinnings of United States government, (2) political beliefs and behaviors, (3) political parties, interest groups, and mass media, (4) institutions of national government, (5) public policy, and (6) civil rights and civil liberties. Daily readings and writings and also a short reading before the class term begins are required. **1 credit, 1 semester course Indiana College Core Course: POLS 101**

### **ECONOMICS - Grade 12 (IDOE # 1514)**

Economics analyzes how human beings participate in a free enterprise system. This course gives an in-depth view of scarcity, factors of production, supply and demand, market structures, the role of government, money and the role of financial institutions, economic stability and trade. The student will also examine the function of our government in the market economy. The student will have a better understanding of the current economic situation and their role in that situation. **1 credit, 1 semester course.**

### **AP MICROECONOMICS - Grade 12 (IDOE # 1566)**

This is a course designed to provide students with a thorough understanding of the principles of economics as they apply to individual decision-making units, including individual households and firms. Students will spend time examining the theory of consumer behavior, the theory of the firm, and the behavior of profit-maximizing firms under various market structures. They will evaluate the efficiency of the outcomes with respect to price, output, consumer surplus, and producer surplus. Students will have an opportunity to examine the behaviors of households and businesses in factor markets, and learn how the determination of factor prices, wages, interest, and rent influence the distribution of income in a market economy. **1 credit, 1 semester course.**

**ETHNIC STUDIES - Grades 9, 10, 11, 12 (IDEO # 1516)**

Ethnic Studies provides opportunities to broaden students' perspectives concerning lifestyles and cultural patterns of ethnic groups in the United States. This course will either focus on a particular ethnic group or groups, or use a comparative approach to the study of patterns of cultural development, immigration, and assimilation, as well as the contributions of specific ethnic or cultural groups. The course may also include analysis of the political impact of ethnic diversity in the United States. **1 credit, 1 semester course.**

**INDIANA STUDIES - Grades 9, 10, 11, 12 (IDOE # 1518)**

Indiana Studies is an integrated course that compares and contrasts state and national developments in the areas of politics, economics, history, and culture. The course uses Indiana history as a basis for understanding current policies, practices, and state legislative procedures. It also includes the study of state and national constitutions from a historical perspective and as a current foundation of government. Examination of individual leaders and their roles in a democratic society will be included, and students will examine the participation of citizens in the political process. Selections from Indiana arts and literature may also be analyzed for insights into historical events and cultural expressions. **1 credit, 1 semester course.**

**CURRENT PROBLEMS, ISSUES, AND EVENTS - Grade 9,10,11,12 (IDOE #1512)**

Current Problems, Issues, and Events gives students the opportunity to apply investigative and inquiry techniques to the study of significant problems or issues. Students develop competence in (1) recognizing cause and effect relationships, (2) recognizing fallacies in reasoning and propaganda devices, (3) synthesizing knowledge into useful patterns, (4) stating and testing hypotheses, and (5) generalizing based on evidence. Problems or issues selected will have contemporary historical significance and will be studied from the viewpoint of the social science disciplines. Community service programs and internships within the community may be included. **1 credit, 1 semester course.**

**SOCIOLOGY - Grade 9, 10, 11, 12 (IDOE #1534)**

Sociology allows students to study human social behavior from a group perspective. The sociological perspective is a method of studying recurring patterns in people's attitudes and actions and how these patterns vary across time, cultures, and in social settings and groups. Students describe the development of sociology as a social science and identify methods of research. Through research methods such as scientific inquiry students examine society, group behavior, and social structures. The influence of culture on group behavior is addressed through institutions such as the family, religion, education, economics, community organizations, government, and political and social groups. The impact of social groups and institutions on group and individual behavior and the changing nature of society will be examined. Influences on group behavior and social problems are included in the course. Students also analyze the role of individuals in the community and social problems in today's world. **1 credit, 1 semester course.**

**GEOGRAPHY - GRADE 9, 10, 11, 12 (IDOE #1570)**

Geography and History of the World is designed to enable students to use geographical tools, skills and historical concepts to deepen 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 of primary and secondary sources, organizing information by creating graphic representations, analyzing information to determine and explain patterns and trends, planning for the future, and documenting and presenting findings orally or in writing. The historical geography concepts used to explore global themes include change over time, origin, diffusion, physical systems, cultural landscapes, and spatial distribution/patterns and interaction/relationships. Students use the knowledge, tools, and skills obtained from this course in order to 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 21st Century. •Recommended Grade: none •Required Prerequisites: none •Recommended Prerequisites: none •Counts as a Social Studies requirement for the General Diploma •Counts as an elective for all diplomas •Fulfills the Geography History of the World/World History and Civilization graduation requirement for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas **Credits: 2 semester course, 1 credit per semester**

**PHYSICAL EDUCATION****ALTERNATIVE SUPERVISED PHYSICAL EDUCATION PROGRAM – Grades 9, 10, 11, 12 (IDOE #3542 & #3544)**

Students may earn their physical education requirements through a supervised program during the fall and/or spring sessions. Minimum requirements include sixty (60) hours of direct instruction and successful completion of sports/ band season. An application must be approved by the student's school counselor PRIOR to official enrollment. **1 credit, 1 semester course.**

**PHYSICAL EDUCATION I - Grades 9, 10, 11, 12 (IDOE # 3542)**

Physical Education I is required for graduation. This is the first of two required courses. This is a planned, sequential, and comprehensive course designed to provide students with opportunities to actively participate in team sport activities, individual physical activities, and outdoor pursuits. Ongoing assessment includes both written and performance-based skill evaluation. **Recommended in grade 9. 1 credit, 1 semester course.**

**PHYSICAL EDUCATION II - Grades 9, 10, 11, 12 (IDOE # 3544)**

Physical Education II is required for graduation. This is the second of two required physical education courses and will run consecutively to physical education I. This is a planned, sequential, and comprehensive course designed to provide students with opportunities to actively participate in team sport activities, individual physical activities, and outdoor pursuits. Ongoing assessment includes both written and performance-based skill evaluation. **Recommended in grade 9. 1 credit, 1 semester course.**

### **Advanced Health Education - GRADES 10,11, 12 (IDOE # 3500)**

Advanced Health and Wellness, an elective course that is aligned to Indiana's Academic Standards for Health and Wellness, provides advanced knowledge and skills to help students adopt and maintain healthy behaviors. Through a variety of instructional strategies, students practice the development of functional advanced 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. Advanced Health and Wellness provides students with an in-depth study of promoting personal health and wellness, physical activity, healthy eating; promoting safety and preventing unintentional injury and violence; promoting mental and emotional health, a tobacco, alcohol, and other drug-free lifestyle; and promoting human development and family health. The scientific components of health and wellness, health issues and concerns, health risk appraisals, individual wellness plans, health promotion and health careers are expanded and explored within the context of the course. This course provides students with the advanced 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. •Recommended Grade: 10, 11, 12 •Required Prerequisites: Health and Wellness course •Recommended Prerequisites: none •Credits: **1 semester course, 1 credit per semester, 1 credit maximum** •Counts as an elective requirement for all diplomas

### **ELECTIVE PHYSICAL EDUCATION\* - Grades 9, 10, 11, 12 (IDOE # 3560)**

This is an elective course designed for advanced, highly motivated students interested in an intense physical fitness workout daily. The goal of the class is to provide students with an appropriate level of cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition necessary for a healthy and productive life. This course is also designed for any students interested in weight training and strength development to improve athletic performance. Students will stretch, lift weights, and run daily in a structured program. Students will have an opportunity to design and develop an appropriate personal fitness program that enables them to achieve a desired level of fitness. In addition, students will have the opportunity to study physical development concepts and principles of sport and exercise as well as opportunities to develop or refine skills and attitudes that promote lifelong fitness. Ongoing assessment includes both written and performance-based skill evaluation. *An additional lab fee will be required for some off campus activities.* **Prerequisite: Physical Education I & II. 1 credit, 1 semester course**  
**\*Elective Physical Education may be repeated for a total of 8 credits.**

## **AGRICULTURE**

### **INTRODUCTION TO AGRICULTURE -8th grade only (IDOE # 5056)**

This is highly recommended as a prerequisite and foundation for all other agricultural classes.. This course will cover animal science, plants, soil, landscape, hunter safety, agriculture careers, and FFA. Students should enjoy “hands-on” problem-solving individual and team activities. This course meets the directed elective requirement for the Academic Honors Diploma and Core 40 Diploma. **2 credit, 2 semester course**

### **\*\*\* PRINCIPLES OF AGRICULTURE- Grades 9,10 (IDOE # 7117) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

Students will explore Agriculture, Food, and Natural Resource (AFNR) systems related to the production of food, fiber and fuel and the associated health, safety and environmental management systems. Topics covered in the course range from animals, plants, food, hunter safety, natural resources, ag power, structures and technology, and agribusiness. Participation in FFA and Supervised Agricultural Experiences (SAE) will be an integral part of this course in order to develop leadership and career ready skills

**This course earns Ivy Tech Credit and is in the Agriculture Pathway. 2 credit, 2 semester course**

### **\*\*\* ANIMAL SCIENCE - Grades 10, 11, 12 (IDOE # 5008) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

This course provides students with an overview of the field of animal science. Students participate in a large variety of activities and laboratory work including real and simulated animal science experiences and projects. Students will learn through “hands-on” problem-solving individual and team activities. This course meets the science requirement for all Diplomas. **Prerequisite: Principles of Agriculture, (or instructor approval).**

**This course earns Ivy Tech Credit and is in the Agriculture Pathway. 2 credit, 2 semester course**

### **\*\*\* ADVANCED LIFE SCIENCE, ANIMALS – Grades 10, 11, 12 (IDOE # 5070) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

This course meets a CORE 40 science requirement for the Academic Honors Diploma and Core 40 Diploma. This is a hands on laboratory based class. Students will learn animal growth, development and physiology as it pertains to agricultural science. Topics covered include taxonomy, organ systems, genetics, and ecology. This course meets the science requirement for all Diplomas. **Prerequisite: Principles of Agriculture. This is in the Agriculture Pathway and fulfills Science requirement for all diplomas . 2 credit, 2 semester course**

### **\*\*\* FOOD SCIENCE - Grades 10,11,12 (IDOE # 5102)\*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

This course is a program that provides students with an overview of food science and its importance. Students will learn through a project-based approach and hands on activities Topics covered in this course include nutrition, preservation, packaging and labeling, food commodities, food regulations, issues and careers in food science. This course meets the directed elective requirement for the Academic Honors Diploma and Core 40 Diploma. **Prerequisite: Principles of Agriculture, Biology I, or Into to Culinary Arts. This course is in the Agriculture pathway. 2 credit, 2 semester course**

**\*\*\*ADVANCED LIFE SCIENCE: FOODS - Grades 11, 12 (IDOE #5072) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

Advanced Life Science: Foods provides students with opportunities to understand how biology, chemistry and physics principles apply to the composition of foods, the nutrition of foods, food and food product development, food processing, food safety and sanitation, food packaging and food storage. Students completing this course will be able to apply the principles of scientific inquiry to solve problems related to biology, physics and chemistry in the context of highly advanced industry applications of foods in the area of advanced life science in foods. This course meets the science requirement for all Diplomas. **Prerequisite: Principles of Agriculture. This course is in the Agriculture Pathway and fulfills Science requirement for all diplomas. 2 credit, 2 semester course**

**\*\*\*AGRIBUSINESS – Grades 11, 12 (IDOE #5002) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

This course introduces students to the principles of business organization and management Concepts covered in the course include; food and fiber, forms of business, finance, marketing, management, sales, careers, leadership development, and supervised agricultural experience programs.

**Prerequisites: Principles of Agriculture & Animal Science . 2 credit, 2 semester Course This course is in the Agriculture Pathway and fulfills quantitative requirement for all diplomas. 2 credit, 2 semester course**

**AGRICULTURE POWER, STRUCTURE & TECHNOLOGY - Grades 10,11,12 (IDOE#5088) \*\*DUAL CREDIT OPPORTUNITY\*\***

Agriculture Power, Structure and Technology is a two semester, lab intensive course in which students develop an understanding of basic principles of tool selection, operation, maintenance, and management of agricultural equipment in concert with the utilization of technology. Topics covered include: safety, problem solving/troubleshooting, electricity, plumbing, concrete, carpentry, metal technology, engines, emerging technologies, leadership development, supervised agricultural experience, and career opportunities in the area of agriculture power, structure, and technology.

**Prerequisites: Principles of Agriculture & Animal Science . 2 credit, 2 semester Course**

**LEADERSHIP DEVELOPMENT IN ACTION – Grades 10, 11, 12 (IDOE # 5237)**

Leadership Development in Action is a project based course where students will learn communication, leadership and management skills in order to conduct projects. Each student will develop goals, design and implement an action plan, and reflect on accomplishments. Membership in an Indiana recognized CTSO is required. This course meets the directed elective requirement for the Academic Honors Diploma and Core 40 Diploma. **2 credit, 2 semester course ; May be repeated for up to 6 credits.**

## **BUSINESS/VOCATIONAL BUSINESS**

**INTRODUCTION TO BUSINESS- Grades 9,10 (IDOE #4518)**

Introduction to Business introduces students to the world of business, including the concepts, functions, and skills required for meeting the challenges of operating a business in the twenty-first century on a local, national, and international scale. The course covers business management, entrepreneurship, marketing fundamentals, and business ethics and law. The course develops business vocabulary and provides an overview of business and the role that business plays in economic, social, and political environments.

**Credits: 2 semester course, 1 credit per semester, 2 credits maximum Counts as a Directed Elective or Elective for all diplomas.**

**BUSINESS MATH - Grades 11, 12 (IDOE # 4512)**

Business Math is a course designed to prepare students for roles as entrepreneurs, producers, and business leaders by developing abilities and skills that are part of any business environment. A solid understanding of math including algebra, basic geometry, statistics, and probability provides the necessary foundation for students interested in careers in business and skilled trade areas. The content includes mathematical operations related to accounting, banking and finance, marketing, and management.

**Prerequisites: Algebra I Credits: 2 semester course, 1 credit per semester, 2 credits maximum Counts as an Elective or Directed Elective for all diplomas. Fulfills a Mathematics requirement for the General Diploma or Certificate of Completion only. Qualifies as a quantitative reasoning course.**

**PERSONAL FINANCIAL RESPONSIBILITY - Grades 10, 11, 12 (IDOE # 4540)**

Personal Financial Responsibility addresses the identification and management of personal financial resources to meet the financial needs and wants of individuals and families, considering a broad range of economic, social, cultural, technological, environmental, and maintenance factors. This course helps students build skills in financial responsibility and decision making; analyze personal standards, needs, wants, and goals; identify sources of income, saving and investing; understand banking, budgeting, record-keeping and managing risk, insurance and credit card debt.

**Credits: 1 semester course, 1 credit per semester, Counts as a Directed Elective or Elective for all diplomas. Qualifies as a quantitative reasoning course.**

**BUSINESS LAW & ETHICS - Grades 11, 12 (IDOE # 4560)**

Business Law is a course that provides a foundation for a basic understanding of the law as it pertains to individuals and businesses. The recognition of legal problems, the prevention of problems when possible, and the utilization of professional counsel will be emphasized in the instruction. **1 credit, 1 semester course**

### **DIGITAL APPLICATIONS AND RESPONSIBILITY - Grades 11, 12 (IDOE # 4528)**

Digital Applications and Responsibility prepares students to use technology in an effective and appropriate manner in school, in a job, or everyday life. Students develop skills related to word processing, spreadsheets, presentations, and communications software. Students learn what it means to be a good digital citizen and how to use technology, including social media, responsibly. Students expand their knowledge of how to use digital devices and software to build decision-making and problem-solving skills. Counts as a Directed Elective or Elective for all diplomas. **1 credit, 1 semester course**

### **ENTREPRENEURSHIP - Grades 12 (IDOE # 5966)**

This class will introduce entrepreneurship (owning your own business), and develop 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. **Credits: 2 semester course, 1 credit per semester, 2 credits maximum** **Required Prerequisites - ANY CTE Concentrator Sequence except Entrepreneurship.**

### **\*\*\*PRINCIPLES OF BUSINESS MANAGEMENT – Grades 9, 10, 11 (IDOE #5914)\*\*\* **DUAL CREDIT OPPORTUNITY\*\*\*****

Principles of Business Management examines business ownership, organization principles and problems, management, control facilities, administration, financial management, and development practices of business enterprises. This course will also emphasize the identification and practice of the appropriate use of technology to communicate and solve business problems and aid in decision making. Attention will be given to developing business communication, problem-solving, and decision-making skills using spreadsheets, word processing, data management, and presentation software. **Credits: 2 semester course, 1 credit per semester, 2 credits maximum** **MARKETING AND SALES PATHWAY**

### **\*\*\*MARKETING FUNDAMENTALS - Grades 11, 12 (IDOE 5914)\*\*\* **DUAL CREDIT OPPORTUNITY\*\*\*****

Marketing Fundamentals provides a basic introduction to the scope and importance of marketing in the global economy. Course topics include the seven functions of marketing: promotion, channel management, pricing, product/service management, market planning, marketing information management, and professional selling skills. Emphasis is marketing content but will involve use of oral and written communications, mathematical applications, problem-solving, and critical thinking skills through the development of an integrated marketing plan and other projects. **Credits: 2 semester course, 1 credit per semester, 2 credits maximum** **REQUIRED PREREQUISITES: Principles of Business Management**  
**\* Formerly Principles of Marketing: Principles course is not required until 24-25 school year. MARKETING AND SALES PATHWAY**

### **\*\*\*ADMINISTRATIVE AND OFFICE MANAGEMENT - Grade 12 (IDOE #5268)\*\*\* **DUAL CREDIT OPPORTUNITY\*\*\*****

Administrative and Office Management prepares students to plan, organize, direct, and control the functions and processes of a firm or organization and to perform business-related functions. Students are provided opportunities to develop attitudes and apply skills and knowledge in the areas of business administration, management, and finance. Individual experiences will be based upon the student’s career and educational goals. **Credits: 2 semester course, 1 credit per semester, 2 credits maximum** **REQUIRED PREREQUISITES: Principles of Business Management or Marketing Fundamentals**

### **\*\*\* STRATEGIC MARKETING - Grade 10, 11, 12 (IDOE # 5918)\*\*\* **DUAL CREDIT OPPORTUNITY\*\*\*****

Strategic Marketing builds upon the foundations of marketing and applies the functions of marketing at an advanced level. Students will study the basic principles of consumer behavior and examine the application of theories from psychology, social psychology, and economics. The relationship between consumer behavior and marketing activities will be reviewed. **Credits: 2 semester course, 1 credit per semester, 2 credits maximum** **REQUIRED PREREQUISITES: Principles of Business Management\*, Marketing Fundamentals**  
**\* Principles courses are not required until 24-25 school year. MARKETING AND SALES PATHWAY**

### **PRINCIPLES OF DIGITAL DESIGN - Grade 9, 10, 11 (IDOE #7140)**

Principles of Digital Design introduces students to fundamental design theory. Investigations into design theory and color dynamics will provide experiences in applying design theory, ideas and creative problem solving, critical peer evaluation, and presentation skills. Students will have the opportunity to apply the design theory through an understanding of basic photographic theory and technique. Topics will include image capture, processing, various output methods, and light. **Credits: 2 semester course, 1 credit per semester, 2 credits maximum. DIGITAL DESIGN PATHWAY**

### **DIGITAL DESIGN GRAPHICS - Grade 10, 11, 12 (IDOE #7141)**

Digital Design Graphics will help students to understand and create the most common types of computer graphics used in visual communications. Skills are developed through work with professional vector-based and page layout software used in the industry. Additionally, students will be introduced to a full range of image input technology and manipulation including conventional photography, digital imaging, and computer scanners. Students will learn to communicate concepts and ideas through various imaging devices. **Credits: 2 semester course, 1 credit per semester, 2 credits maximum. PREREQUISITE - PRINCIPLES OF DIGITAL DESIGN DIGITAL DESIGN PATHWAY**

**COMPUTER ILLUSTRATION AND GRAPHICS - Grade 10, 11, 12 (IDOE #4516)**

Computer Illustration and Graphics introduces students to the computer's use in visual communication. The focus of the course is on basic computer terminology and use, mastering fundamental skills, and developing efficient working styles. These skills are then developed by creating work with imaging, drawing, interactive, and page layout software. The course 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. This course also covers advertising theory and preparation of copy, lettering, posters, vector illustrations, graphics and logos, and artwork in addition to incorporation of photographic images. Communication skills will be emphasized through the study of effective methods used to design products that impart information and ideas. Advanced instruction might include experiences in silk screening and air brush techniques as well as activities in designing product packaging and commercial displays or exhibits. **2 credit, 2 semester course**

**GRAPHIC DESIGN AND LAYOUT - Grade 10, 11, 12 (IDOE #5550)**

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 Indiana Department of Education 130 High School Course Titles and Descriptions 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. **Credits: 2 semester course, 1 credit per semester, 2 credits maximum. PREREQUISITE - PRINCIPLES OF DIGITAL DESIGN: DIGITAL DESIGN GRAPHICS DIGITAL DESIGN PATHWAY**

**DIGITAL DESIGN CAPSTONE - Grade 12 (IDOE #7246)**

The Digital Design Capstone course provides students the opportunity to dive deeper into advanced concepts of Visual Communication including user experience/user interface design, video production editing, animation and/or web design. Depending on the length of the course, students may focus their efforts on one area or explore multiple aspects. **Credits: 2 semester course, 1-3 credit per semester, 6 credits maximum. PREREQUISITE - DIGITAL DESIGN SEQUENCE DIGITAL DESIGN PATHWAY**

**GRAPHIC IMAGING TECHNOLOGY I - Grades 11, 12 (IDOE # 5572)**

This course focuses on theory and laboratory activities in pre-press, press and finishing operations. Emphasis will be placed on elements of design and layout leading to computerized electronic generation, plate preparation, press room operation and finishing techniques. Instructional activities will enhance students' language arts skills through the use of proofreading, spelling, and punctuation exercises. This course will include actual production processes in conjunction with classroom assignments embracing the technologies of printing, publishing, packaging, electronic imaging and their allied industries. **4 credit, 2 semester course (this course requires 2 periods) \*Students may enroll for DUAL Credits (9 hours) through Project EXCEL/Vincennes University.**

**GRAPHIC IMAGING TECHNOLOGY II - Grade 12 (IDOE # 5572)**

This course is designed around a working print shop environment, concentrating on advanced theory and lab work. Emphasis is placed on advanced layout and design, and production. Advanced Photoshop, InDesign, and Illustrator. **Prerequisite: Graphic Imaging Technology I. 4 credit, 2 semester course (this course requires 2 periods)**

**INTERNSHIP/ WORK BASED LEARNING: CAPSTONE - Grade 12 (IDOE # 5974)**

Work Based Learning Capstone is a stand-alone course that prepares students for college and career. Work-Based Learning means sustained interactions with industry or community professionals in real workplace settings, to the extent practicable, or simulated environments at an educational institution that foster in-depth, first hand engagement with the tasks required of a given career field, that are aligned to curriculum and instruction. Work Based Learning Capstone experiences occur in workplaces and involve an employer assigning a student meaningful job tasks to develop his or her skills, knowledge, and readiness for work. A clear partnership agreement and training plan is developed by the student, teacher, and workplace mentor/supervisor to guide the student's work-based experiences and assist in evaluating achievement and performance. Related Instruction shall be organized and planned around the activities associated with the student's individual job and career objectives in a pathway and shall be taught during the same semester the student is participating in the work-based experience. For a student to become employable, the related instruction should cover: (a) employability skills, and (b) specific occupational competencies.

The Senior Seminar experience combines classroom instruction and an internship opportunity. Students will prepare for life after high school. Students will develop career related documents, conduct company research, and explore college and career pathways. Students spend a portion of the course at a career site with a Career Mentor. In order to be eligible for placement at an off campus career site, the student must receive a C on the classroom portion of the class and adhere to the work site's dress code and employee handbook policies. Students must drive to school on a daily basis and possess a valid driver's license.

**Credits: 1 - 3 credits per semester - 6 CREDITS maximum: Required Prerequisites: Complete at least one advanced career and technical education course from a program or program of study. Worksite placement must align to the student pathway.**

**A minimum of 85 hours of workplace and classroom activities are required for one credit; 170 hours are required for the two credits. Of the 85 or 170 hours, 18 to 36 hours (at least) - DOES NOT COUNT TOWARDS CTE CONCENTRATOR STATUS**

### **COOPERATIVE EDUCATION-Grade 12 (IDOE #6162 )**

Cooperative Education is an approach to employment training that spans all career and technical education program areas through school-based instruction and on the job training. Time allocations are a minimum of fifteen hours per week of on-the-job training and approximately five hours per week of school-based instruction, focused on employability skills development. Additionally, all state and federal laws and regulations related to student employment and cooperative education must be followed.. **Students must have a job in their career pathway prior to starting the class in the fall semester of their senior year along with their own transportation.**

**Prerequisites: Preparing for College and Careers; two credits in a career and technical education course Credits: 2 semester course, 1-3 credit per semester, up to 6 credits maximum**

### **INTRODUCTION TO COMPUTER SCIENCE - Grade 9, 10 (IDOE #4803)**

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 **Credits: 2 semester course, 1 credit per semester, 2 credits maximum**

### **PRINCIPLES OF COMPUTING - Grade 9, 10, 11 (IDOE #7183)**

Principles of Computing provides students the opportunity to explore how computers can be used in a wide variety of settings. The course will begin by exploring trends of computing and the necessary skills to implement information systems. Topics include operating systems, database technology, cybersecurity, cloud implementations and other concepts associated with applying the principles of good information management to the organization. Students will also have the opportunity to utilize basic programming skills to develop scripts designed to solve problems. Students will learn about algorithms, logic development and flowcharting. **Credits 1 credit per semester, 2 Semester Required, 2 credit maximum**

#### **COMPUTER SCIENCE PATHWAY**

### **TOPICS IN COMPUTER SCIENCE - Grade 10, 11, 12 (IDOE #7351)**

Topics in Computer Science is designed for students to investigate emerging disciplines within the field of computer science. Students will use foundational knowledge from 7183 Principles of Computing to study the areas of data science, artificial intelligence, app/game development, and security. Students will utilize knowledge related to these areas and programming skills to develop solutions to authentic problems. **Credits 1 credit per semester, 2 Semester Required, 2 credit maximum Required Prerequisite - Principles of Computing**

#### **COMPUTER SCIENCE PATHWAY**

### **COMPUTER SCIENCE - Grade 11, 12 (IDOE #7352)**

Computer Science introduces the fundamental concepts of procedural programming. Topics include data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging. The course also offers an introduction to the historical and social context of computing and an overview of computer science as a discipline. **Credits 1 credit per semester, 2 Semester Required, 2 credit maximum Required Prerequisite - Principles of Computing**

#### **COMPUTER SCIENCE PATHWAY**

### **COMPUTER SCIENCE I - Grades 10, 11, 12 (IDOE #4801)**

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. **Prerequisite: Introductions to Computer Science. 2 credit, 2 semester course. Fulfills a science requirements for all diplomas. Qualifies as a Quantitative Reasoning course.**

### **COMPUTER SCIENCE II - Grades 10, 11, 12 (IDOE #5236)**

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. **Prerequisites: Introduction to Computer Science. 2 credit, 2 semester course. Fulfills a science course requirement for all diplomas. Counts a Quantitative Reasoning course.**



### **COMPUTER SCIENCE III: CYBERSECURITY - Grades 11, 12 (IDOE #5253)**

Computer Science III: Cybersecurity introduces the secure software development process including designing secure applications, writing secure code designed to withstand various types of attacks, and security testing and auditing. It focuses on the security issues a developer faces, common security vulnerabilities and flaws, and security threats. The course explains security principles, strategies, coding techniques, and tools that can help make software fault tolerant and resistant to attacks. Students will write and analyze code that demonstrates specific security development techniques. Students will also learn about cryptography as an indispensable resource for implementing security in real-world applications. Students will learn foundations of cryptography using simple mathematical probability. Information theory, computational complexity, number theory, and algebraic approaches will be covered. **Prerequisites: Computer Science I. 2 credit, 2 semester course. Fulfills a science requirements for all diplomas. Qualifies as a Quantitative Reasoning course.**

## **FAMILY AND CONSUMER SCIENCES**

### **PRINCIPLES OF CULINARY ARTS - Grade 9 (IDOE # 7173)**

Principles of Culinary and Hospitality is designed to develop an understanding of the hospitality industry and career opportunities, and responsibilities in the food service and lodging industry. Introduces procedures for decision making which affects operation management, products, labor, and revenue. Additionally, students will learn the fundamentals of food preparation, basic principles of sanitation, service procedures, and safety practices in the food service industry including proper operation techniques for equipment. **Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum**

**This is part of the culinary pathway**

### **NUTRITION AND WELLNESS - Grade 10 (IDOE#7171)**

Nutrition students will learn the characteristics, functions and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will be made aware of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation. This course will engage students in hands-on learning of nutritional concepts such as preparing nutrient dense meals or examining nutritional needs of student athletes. **Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum**

**Required Prerequisites: Principles of Culinary**

**This is part of the Culinary pathway**

### **CULINARY ARTS & HOSPITALITY I – Grades 10, 11 (IDOE # 5440) \*\*DUAL CREDIT OPPORTUNITY\*\***

Major topics include: introduction to the hospitality industry; food safety and personal hygiene; sanitation and safety; regulations, procedures, and emergencies; basic culinary skills; culinary math; and food preparation techniques and applications; principles of purchasing, storage, preparation, and service of food and food products; ; apply basic principles of sanitation and safety in order to maintain safe and healthy food service and hospitality environments; use and maintain related tools and equipment; and apply management principles in food service or hospitality operations.

**Recommended Prerequisites: Nutrition and Wellness, Introduction to Culinary Arts & Hospitality • Credits: 1-3 credits per semester, maximum of 6 credits.**

### **CULINARY ARTS & HOSPITALITY II – Grade 11, 12 (IDOE #5346)**

Major topics for this advanced course include: basic baking theory and skills, introduction to breads, introduction to pastry arts, nutrition, nutrition accommodations and adaptations, cost control and purchasing, and current marketing and trends. Instruction and intensive laboratory experiences include commercial applications of principles of nutrition, aesthetic, and sanitary selection; purchasing, storage, preparation, and service of food and food products; using and maintaining related tools and equipment; baking and pastry arts skills; managing operations in food service, food science, or hospitality establishments; providing for the dietary needs of persons with special requirements; and related research, development, and testing.

Intensive laboratory experiences with commercial applications are a required component of this course of study. Student laboratory experiences may be either school-based or "on-the-job" or a combination of the two. **Recommended Prerequisites: Culinary Arts and Hospitality Management •**

**Credits: 1-3 credits per semester, maximum of 6 credits • Counts as a Directed Elective or Elective for the General.**

### **\*\*\*ADVANCED LIFE SCIENCE:FOODS - Grades 11, 12 (IDOE #5072) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

Advanced Life Science: Foods provides students with opportunities to understand how biology, chemistry and physics principles apply to the composition of foods, the nutrition of foods, food and food product development, food processing, food safety and sanitation, food packaging and food storage. Students completing this course will be able to apply the principles of scientific inquiry to solve problems related to biology, physics and chemistry in the context of highly advanced industry applications of foods in the area of advanced life science in foods. **Prerequisite: Biology 1, Chemistry 1 or ICP and Intro to Agriculture. This course earns Ivy Tech Credit and is in the Food Science Pathway . 2 credit, 2 semester course.**

## Education

### **PRINCIPLES OF TEACHING - Grade 9 (IDOE #7161) \*\*DUAL CREDIT OPPORTUNITY\*\***

This course provides a general introduction to the field of teaching. Students will explore educational careers, teaching preparation, and professional expectations as well as requirements for teacher certification. Current trends and issues in education will be examined. A volunteer experience of a minimum of 20 hours is required for successful completion of this course. This course has been approved to be offered for dual credit. Students pursuing this course for dual credit are still required to meet the minimum prerequisites for the course and pass the course with a C or better in order for dual credit to be awarded.

**Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum**

**This is part of the Education pathway**

### **CHILD AND ADOLESCENT DEVELOPMENT - Grade 10 (IDOE#7157)**

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

Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum

Required Prerequisites: Principles of Teaching

**This is part of the Education pathway**

### **TEACHING AND LEARNING - Grade 11 (IDOE #7162)**

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

Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum

Required Prerequisites: Principles of Teaching, Child and Adolescent Development

**This part of the Education pathway**

### **EDUCATION PROFESSIONS - Grades 11 & 12 (IDOE # 5408) -\*\*DUAL CREDIT OPPORTUNITY\*\***

This is an introductory course that provides a general introduction to the field of teaching. Students will explore educational careers, teaching preparation and professional expectations as well as requirements for teacher certification. Current trends and issues in education will be examined. Students will spend part of the class time assigned to local junior high and elementary classrooms. The student must receive a C on the classroom portion of the class and adhere to the work site's dress code and employee handbook policies. Students must drive to school on a daily basis and possess a valid driver's license. Three undergraduate credit hours may be earned through Ivy Tech Community College for Intro to Education. You must meet in the entrance criteria for Ivy Tech and earn a C- or higher in the course in order to receive college credit. See your counselor for details.

**Prerequisites: Minimum GPA 2.5. 2 credit, 2 semester course. This is part of the Education pathway**

### **EDUCATION PROFESSIONS II - Grade 12 (IDOE # 5404)\*\*DUAL CREDIT OPPORTUNITY\*\***

Education Professions II prepares students for employment in education and related careers and provides the foundation for study in higher education in these career areas. An active 101 Indiana Department of Education High School Course Titles and Descriptions learning approach that utilizes higher order thinking, communication, leadership, and management processes is recommended in order to integrate suggested topics into the study of education and related careers. The course of study includes, but is not limited to: the teaching profession, the learner and the learning process, planning instruction, learning environment, and instructional and assessment strategies. Extensive field experiences in one or more classroom settings, resumes, and career portfolios are required components. A standards-based plan guides the students' field experiences. Students are monitored in their field experiences by the Education Professions II teacher. Articulation with post-secondary programs is encouraged. **Prerequisite: Education Professions I. 2 semester course, 2 semesters required. 1 - 3 credits per semester.**

### **INTERPERSONAL RELATIONSHIPS - Grade 9, 10, 11 (IDOE #5364)**

Interpersonal Relationships is an introductory course that is especially relevant for students interested in careers that involve interacting with people. It is also valuable for all students as a life foundation and academic enrichment. This course addresses knowledge and skills needed for positive and productive relationships in career, community, and family settings. Major course topics include communication skills; leadership, teamwork, and collaboration; conflict prevention, resolution, and management; building and maintaining relationships; and individual needs and characteristics and their impacts on relationships. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of interpersonal relationships. Direct, concrete language arts proficiencies will be applied. Service learning and other authentic applications are strongly recommended. This course provides a foundation for continuing and post-secondary education for all career areas that involve interacting with people both inside and outside of a business/organization, including team members, clients, patients, customers, and the general public. **1 credit, 1 semester course.**

### **CHILD DEVELOPMENT - Grades 9, 10, 11, 12 (IDOE # 5362)**

Child Development is an introductory course for all students as a life foundation and academic enrichment; it is especially relevant for students interested in careers that draw on knowledge of children, child development, and nurturing of children. This course addresses issues of child development from conception/prenatal through age 3. It includes the study of prenatal development and birth; growth and development of children; child care giving and nurturing; and support systems for parents and caregivers. A project-based approach that utilizes higher order thinking, communication, leadership, management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of child development. Direct, concrete mathematics and language arts proficiencies will be applied. Authentic applications such as introductory laboratory/field experiences with young children and/or service learning that build knowledge of children, child development, and nurturing of children are strongly recommended. This course provides the foundation for continuing and post-secondary education in all career areas related to children, child development, and nurturing of children. *This course is one of the six FACS courses from which students may choose three to fulfill the required Health and Safety credit—See Rule 511 IAC 6-7-6 (6).* **1 credit, 1 semester.**

### **ADVANCED CHILD DEVELOPMENT - Grades 10, 11, 12 (IDOE # 5360)**

Advanced Child Development is for those students interested in life foundations, academic enrichment, and/or careers related to knowledge of children, child development, and nurturing of children. This course addresses issues of child development from age 4 through age 8 (grade 3). It builds on the Child Development course, which is a prerequisite. Advanced Child Development includes the study of professional and ethical issues in child development; child growth and development; child development theories, research, and best practices; child health and wellness; teaching and guiding children; special conditions affecting children; and career exploration in child development and nurturing. A project based approach that utilizes higher order thinking, communication, leadership, management, and fundamentals to college and career success is recommended in order to integrate these topics into the study of child development. Direct, concrete mathematics and language arts proficiencies will be applied. Service learning, introductory laboratory/field experiences with children in preschool and early elementary school settings, and other authentic applications are strongly recommended. This course provides a foundation for continuing and post-secondary education in all career areas related to children, child development, and nurturing of children. Prerequisites: Child Development. **2 credit, 2 semester course.**

## **INDUSTRIAL TECHNOLOGY**

### **Welding/Manufacturing - Cub Manufacturing**

#### **PRINCIPLES OF WELDING - Grade 9 (IDOE #7110)**

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.

**Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits**

#### **Maximum**

**This class is part of the welding pathway**

#### **SHIELDED METAL ARC WELDING- Grade 10 (IDOE #7111)**

Shielded Metal Arc Welding involves the theory and application of the Shielded Metal Arc Welding process. Process theory will include basic electricity, power sources, electrode selection, and all aspects pertaining to equipment operation and maintenance. Laboratory welds will be performed in basic weld joints with a variety of electrodes in the flat, horizontal and vertical positions. Emphasis will be placed on developing the basic skills necessary to comply with AWS industry standards. Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum

**Required Prerequisite: Principles of Welding**

**This class is part of the welding pathway**

#### **GAS WELDING - Grade 11 (IDOE #7101) -**

Gas Welding Processes is designed to cover the operation of Gas Metal Arc Welding (MIG) equipment. This will include all settings, adjustments and maintenance needed to weld with a wire feed system. Instruction on both short-arc and spray-arc transfer methods will be covered. Tee, lap, and open groove joints will be done in all positions with solid, fluxcore, and aluminum wire. Test plates will be made for progress evaluation. Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum

**Required Prerequisite: Principles of Welding, Shielded Metal Arc Welding**

**This class is part of the welding pathway**

#### **WELDING TECHNOLOGY CAPSTONE - Grade 12 (IDOE # 7226) \*\*DUAL CREDIT OPPORTUNITY\*\***

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

**Required Prerequisites: Principles of Welding, Shielded Metal Arc Welding, Gas Welding This class is part of the welding pathway**

## **DIESEL**

### **INTRODUCTION TO TRANSPORTATION - Grades 9, 10, 11, 12 (IDOE # 4798)**

*Introduction to Transportation* is an introductory course designed to help students become familiar with fundamental principles in modes of land, sea, air, and space transportation, including basic mechanical skills and processes involved in transportation of people, cargo and goods. Students will gain and apply knowledge and skills in the safe application, design, production, and assessment of products, services, and systems as it relates to the transportation industries. Content of this course includes the study of how transportation impacts individuals, society, and the environment. This course allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant transportation related activities, problems, and settings. **2 credit, 2 semester course.**

### **PRINCIPLES OF DIESEL - Grade 10 (IDOE # 7216)**

This course introduces the maintenance requirements and procedures of modern diesel engines and medium and heavy-duty trucks. Proper procedures and requirements for the Federal Highway Safety Inspection (DOT) will be discussed and practiced. In addition, this course gives students an overview of the electrical operating systems of the modern automobile. Students will be introduced to the safety and operation of equipment and tools used in the electrical diagnosis and repair in the automotive electrical industry. Students will study the fundamentals of electricity and automotive electronics.

**Prerequisites:** Intro to Transportation This class is in the diesel services pathway.

### **DIESEL - STEERING AND BRAKES - Grade 10, 11 (IDOE #7210)**

This course studies steering, and suspension systems commonly used on modern tractors and trailers. Study will include steering and suspension components, power steering units, alignment theory and procedures, tire repair and service, and wheel balancing. Diagnosis, repair, and servicing of components including modern air suspension systems will be emphasized. Additionally, this course will cover theory, service, and repair of medium and heavy truck brake systems and their components. Emphasis is given to air brakes and their theory of operation, repair, and service of system.

**Credits:** 2 semester course, 2 semesters required,

**Prerequisite:** Introduction to Transportation & Principles of Diesel. 2 semester course, 1-3 credits per semester.

**This class is in the diesel services pathway.**

### **DIESEL - TRANSMISSIONS -Grade 11, 12 (IDOE# 7211)**

This course explores theory, diagnosis, and overhaul procedures related to manual transmissions and differentials. Course includes service of twin countershaft, underdrive, overdrive, power-dividers, and air shift systems. Additionally, this course Studies precision tools, equipment, and procedures needed to repair modern diesel engines. Repair, proper assembly, and component identification are studied along with service of removable cylinder liners.

**Credits:** 2 semester course, 2 semesters required,

**Prerequisite:** Introduction to Transportation & Principles of Diesel. 2 semester course, 1-3 credits per semester.

**This class is in the diesel services pathway.**

## **PROJECT LEAD THE WAY**

### **Computer Science**

#### **PLTW – INTRODUCTION TO COMPUTER SCIENCE – Grade 9, 10, 11, 12 (IDOE #4803)**

Designed to be the first computer science course for students who have never programmed before, ICS is an optional starting point for the PLTW Computer Science program. Students work in teams to create apps for mobile devices using MIT App Inventor<sup>®</sup>. They explore the impact of computing in society and build skills in digital citizenship and cybersecurity. Beyond learning the fundamentals of programming, students build computational thinking skills by applying computer science to collaboration tools, modeling and simulation, and data analysis. In addition, students transfer the understanding of programming gained in App Inventor to text-based programming in Python<sup>®</sup> and apply their knowledge to create algorithms for games of chance and strategy. **2 credit, 2 semester course.**

#### **PLTW – AP COMPUTER SCIENCE PRINCIPLES – Grades 10, 11, 12 (IDOE #4568)**

Computer Science and Software Engineering PLTW is a new Project Lead the Way course that is under development within the PLTW Pathway-To-Engineering project for full implementation in 2014-2015. Students work in teams to develop computational thinking and solve problems. The course aims to develop computational thinking, introduce computational tools that foster creativity, and build student awareness of the tremendous demand in all fields for computer specialists and professionals who have computational skills. The course engages students in considering issues raised by the present and future societal impact of computing. Students practice problem solving with structured activities and progress to open-ended projects and problems that require planning, documentation, and communication skills. NOTE: Use of this PLTW course is limited to schools that have agreed to be part of the Project Lead the Way network and follow all training and data collection requirements. **2 credit, 2 semester course.**

**PLTW – AP COMPUTER SCIENCE A – 10, 11, 12 (IDOE #4570)**

CSA focuses on further developing computational thinking skills through the medium of Android™ App development for mobile platforms. The course utilizes industry-standard tools such as Android Studio, Java™ programming language, XML, and device emulators. Students collaborate to create original solutions to problems of their own choosing by designing and implementing user interfaces and Web-based databases. The course curriculum is a College Board-approved implementation of AP CS A. Prerequisite: **PLTW – CSSE. 2 credit, 2 semester course.**

**Biomedical****PLTW - PRINCIPLES OF THE BIOMEDICAL SCIENCES - Grades 9, 10, 11, 12 (IDOE #5218)**

PLTW Principles of the 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. **Prerequisites: Biology I or concurrent enrollment. Algebra I or concurrent enrollment. 2 credit, 2 semester course.**

**PLTW – HUMAN BODY SYSTEMS - Grades 10, 11, 12 (IDOE #5216)**

PLTW 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 body 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. **Prerequisites: Principles of the Biomedical Sciences. 2 credit, 2 semester course.**

**PLTW – MEDICAL INTERVENTIONS – Grades 11, 12 (IDOE #5217)**

PLTW Medical Interventions is a course that studies medical practices including interventions to support humans in treating disease and maintaining health. Using a project-based learning approach, students will investigate various medical interventions that extend and improve quality of life, including gene therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Students will also study the design and development of various interventions including vascular stents, cochlear implants, and prosthetic limbs. Lessons will cover the history of organ transplants and gene therapy with additional readings from current scientific literature addressing cutting edge developments. Using 3-D imaging software, students will design and build a model of a therapeutic protein. **Prerequisites: Human Body Systems. 2 credit, 2 semester course. (This course will be offered odd years only).**

**\*\*\*PLTW BIOMEDICAL INNOVATIONS - Grade 12 (IDOE # 5219)\*\*\* *POTENTIAL DUAL CREDIT OPPORTUNITY*\*\*\***

PLTW Biomedical Innovation is a capstone course designed to give students the opportunity to design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. Students have the opportunity to work on an independent project and may work with a mentor or advisor from a university, hospital, physician’s office, or industry. Throughout the course, students are expected to present their work to an adult audience that may include representatives from the local business and healthcare community. **2 credit, 2 semester course.**

**Engineering****\*\*\* PLTW - INTRODUCTION TO ENGINEERING DESIGN (IED)- Grades 9, 10 (IDOE# 4802)\*\*\* *DUAL CREDIT OPPORTUNITY*\*\*\***

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. **2 credit, 2 semester course. This class is part of the Engineering Pathway**

**\*\*\*PLTW – COMPUTER INTEGRATED MANUFACTURING (CIM) Grades 10, 11, 12 (IDOE# 5534)\*\*\**DUAL CREDIT OPPORTUNITY*\*\*\***

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. **2 credit, 2 semester course.**

**Required Prerequisites Introduction to Engineering This class is part of the Engineering Pathway**

**\*\*\* PLTW – PRINCIPLES OF ENGINEERING (POE)- Grades 11, & 12 (IDOE# 5644)\*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

*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* **2 credit, 2 semester course. Required Prerequisites Introduction to Engineering and Computer Integrated Manufacturing This class is part of the Engineering Pathway**

**\*\*\* PLTW – ENGINEERING DESIGN AND DEVELOPMENT – Grade 12 (IDOE # 5698) \*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

Engineering Design and Development is an engineering research course in which students work in teams to research, design, test, and construct a solution to an open ended engineering problem. The product development life cycle and a design process are used to guide the team to reach a solution to the problem. The team and/or individual(s) communicates their solution to a panel of stakeholders at the conclusion of the course. As the capstone course in the Engineering Pathway, EDD engages students in critical thinking, problem-solving, time management, and teamwork skills.

**. Required Prerequisites Introduction to Engineering, Computer Integrated Manufacturing, Principles of Engineering This class is part of the Engineering Pathway**

## **FINE ARTS**

All courses meet Core 40, Core 40 with Academic Honors, Core 40 with Technical Honors diploma requirements.

### **INTRODUCTION TO 2-D ART - Grades 9, 10, 11, 12 (IDOE # 4000)**

Students in this course will experience sequential learning experiences in introductory development, understanding and principles of 2-D art. Areas of emphasis include: art history, art criticism, aesthetics and production that lead to portfolio quality works. Fundamental skills in drawing, watercolor, tempera, pen and ink are emphasized. It is planned particularly to give pupils a sound foundation for intermediate and advanced study in various fields of fine and applied art. **1 credit, 1 semester course.**

### **INTRODUCTION TO 3-D ART - Grades 9, 10, 11, 12 (IDOE # 4002)**

Students in this course will experience sequential learning experiences in introductory development, understanding and principles of 3-D art. Areas of emphasis include: art history, art criticism, aesthetics and production that lead to portfolio quality works. Fundamental skills in clay, plaster, and paper mache are emphasized. It is planned particularly to give pupils a sound foundation for intermediate and advanced study in various fields of fine and applied art. **Prerequisite: Introduction to 2-D art. 1 credit, 1 semester course.**

### **ADVANCED 2-D ART - Grades 9, 10, 11, 12 (IDOE # 4004)**

Students in this course will experience sequential learning experiences in intermediate to advanced development, understanding and principles of 2-D art. Areas of emphasis include: art history, art criticism, aesthetics and production that lead to portfolio quality works. Fundamental skills in drawing, watercolor, tempera, pen and ink are emphasized. It is planned particularly to give pupils a sound foundation for intermediate and advanced study in various fields of fine and applied art. **Prerequisite: Intro to 2-D Art. 1 credit, 1 semester course.**

### **ADVANCED 3-D ART - Grades 9, 10, 11, 12 (IDOE # 4006)**

Students in this course will experience sequential learning experiences in intermediate to advanced development, understanding and principles of 3-D art. Areas of emphasis include: art history, art criticism, aesthetics and production that lead to portfolio quality works. Fundamental skills in clay, plaster, wire and paper mache will be emphasized. It is planned particularly to give pupils a sound foundation for intermediate and advanced study in various fields of fine and applied art. **Prerequisite: Intro to 3-D Art. 1 credit, 1 semester course.**

### **DRAWING - Grades 9, 10, 11, 12 (IDOE # 4060)**

Drawing is a course based on the Indiana Academic Standards for Visual Art. Students in drawing 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 drawings utilizing processes such as sketching, rendering, contour, gesture, and perspective drawing and use a variety of media such as pencil, chalk, pastels, charcoal, and pen and ink. 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. **Prerequisite: Intro to 2-D Art. 1 credit, 1 semester repeatable for credit.**

**PAINTING - Grades 9, 10, 11, 12 (IDOE # 4064)**

Painting is a course based on the Indiana Academic Standards for Visual Art. Students taking painting engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production that lead to the creation of portfolio quality works. Students create abstract and realistic paintings, using a variety of materials such as mixed media, watercolor, oil, and acrylics as well as techniques such as stippling, gouache, wash, and impasto. 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. **Prerequisite : Intro 2-D Art 1 credit, 1 semester repeatable for credit.**

**DIGITAL DESIGN - Grades 9, 10, 11, 12 (IDOE # 4082)**

Digital Design is a course based on the Indiana Academic Standards for Visual Art. Students in digital design engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works. They incorporate desktop publishing, multimedia, digitized imagery, computer animation, and web design. Students 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. **Prerequisites: Intro 2-D Art. 1 credit, 1 semester Repeatable for credit.**

**PHOTOGRAPHY- Grades 9, 10, 11, 12 (IDOE # 4062)**

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 dark room 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. **Prerequisites: Intro 2-D Art 1 credit, 1 semester.**

**CERAMICS -Grades 9, 10, 11, 12 (IDOE # 4040)**

Students in this course will experience sequential learning experiences in intermediate to advanced development, understanding and principles of 3 D art through ceramics. Areas of emphasis include: art history, art criticism, aesthetics and production that lead to portfolio quality works. Hand building, molds, slip and glaze techniques, carving and casting will be sculpture techniques utilized. **Prerequisites: Successful completion of all Introduction Art courses. 1 credit, 1 semester course.**

**SCULPTURE - Grades 9, 10, 11, 12 (IDOE # 4044)**

Students in this course will experience sequential learning experiences in intermediate to advanced development, understanding and principles of 3 D art through sculpture. Areas of emphasis include: art history, art criticism, aesthetics and production that lead to portfolio quality works. Wire paper, plaster will be the main sculpture mediums used. **Prerequisites: Successful completion of all Introduction Art courses. 1 credit, 1 semester course.**

**AP ART HISTORY – Grades 9, 10, 11, 12 (IDOE # 4025)**

Art History, Advanced Placement is a course based on the content established by the College Board. Art History is designed to provide the same benefits to secondary school students as those provided by an introductory college course in art history: an understanding and knowledge of architecture, sculpture, painting, and other art forms within diverse historical and cultural contexts. Students examine major forms of artistic expression from the past and the present from a variety of cultures. They learn to look at works of art critically, with intelligence and sensitivity, and to analyze what they see. This course incorporates research, **extensive reading, and analytical writing**. A comprehensive description of this course can be found on the College Board AP Central Course Description web page. **2 credit, 2 semester course.**

**AP STUDIO ART – Grades 9, 10, 11, 12 (IDOE # 4052)**

AP Studio Art is designed for students who are seriously interested in the practical experience of art. AP Studio Art is not based on a written exam; instead, students submit portfolios for evaluation at the end of the school year. The instructional goals of the AP Studio Art program can be described as follows: Encourage creative and systematic investigation of formal and conceptual issues; Emphasize making art as an ongoing process that involves the student in informed and critical decision making; Help students develop technical skills and familiarize them with the functions of the visual elements; Encourage students to become independent thinkers who will contribute inventively and critically to their culture through the making of art. **Prerequisite: Teacher recommendation. 2 credit, 2 semester course.**

**THEATRE PRODUCTIONS, FIRST – Grades 9, 10, 11, 12 (IDOE # 4248)**

Students enrolled in Theatre Production take on responsibilities associated with rehearsing and presenting a fully mounted theatre production. They read and analyze plays to prepare for production; conceive and realize a design for a production, including set, lighting, sound and costumes; rehearse and perform roles in a production; and direct or serve as assistant director for a production. These activities should incorporate elements of theatre history, culture, analysis, response, creative process, and integrated studies. Students should be committed to memorizing lines and performing in public. Out of school time is required in this class during the academic year. Attendance is expected at all rehearsals and performances. **1 credit, 1 semester course. This course may be repeated for up to 2 credits.**

### **THEATRE ARTS, SECOND – Grades 10, 11, 12 (IDOE # 4242)**

Students enrolled in theatre arts read and analyze plays, create scripts and theatre pieces, conceive scenic designs, and develop acting skills. These activities incorporate elements of theatre history, culture, analysis, response, creative process, and integrated studies. Additionally, students explore career opportunities in the theatre, attend and critique theatrical productions, and recognize the responsibilities and the importance of individual theatre patrons in their community. Attendance is expected at all rehearsals and performances. This course requires attendance outside of normal school hours. **Prerequisites: Theatre Production. 1 credit, 1 semester course. This course may be repeated for up to 2 credits.**

### **ADVANCED THEATRE ARTS, THIRD – Grades 11, 12 (IDOE # 4240)**

*Advanced Theatre Arts* is based on the Indiana Academic Standards for Theatre. Students enrolled in Advanced Theatre Arts read and analyze plays and apply criteria to make informed judgments. They draw on events and experiences to create scripted monologues and scenes, create scenic designs for existing plays, and build characters through observation, improvisation and script analysis. These activities should incorporate elements of theatre history, culture, analysis, response, creative process, and integrated studies. Additionally, students explore careers in theatre arts and begin to develop a portfolio of their work. They also attend and critique theatre productions and identify ways to support the theatre in their community. Attendance is expected at all rehearsals and performances. This course requires attendance outside of normal school hours. **Prerequisites: Theatre Production & Theatre Arts. 1 credit, 1 semester course. This course may be repeated for up to 2 credits.**

### **ADVANCED ACTING, FOURTH – Grades 12 (IDOE # 4250)**

*Advanced Acting* is based on the Indiana Academic Standards for Theatre. Students enrolled in Advanced Acting research, create, and perform characters through script analysis, observation, collaboration and rehearsal. These activities should incorporate elements of theatre history, culture, analysis, response, creative process and integrated studies. Additionally, students explore career opportunities in the theatre by attending plays, meeting actors and discussing their work, and becoming theatre patrons in their community. Attendance is expected at all rehearsals and performances. This course requires attendance outside of normal school hours. **Prerequisites: Theatre Production, Theatre Arts, and Advanced Theatre Arts. 1 credit, 1 semester course. This course may be repeated for up to 2 credits.**

### **TECHNICAL THEATRE – Grades 9, 10, 11, 12 (IDOE #4244)**

Technical Theatre is based on the Indiana Academic Standards for Theatre. Students enrolled in Technical Theatre actively engage in the process of designing, building, managing, and implementing the technical aspects of a production. These activities should incorporate elements of theatre history, culture, analysis, response, creative process, and integrated studies. Additionally, students explore career opportunities in the theatre, attend and critique theatrical productions, and recognize the responsibilities and the importance of individual theatre patrons in their community. **1 credit, 1 semester course. This course is repeatable for credit.**

### **\*\*\*ADVANCED FINE ARTS, COLLEGE CREDIT (MUSIC APPRECIATION) - Grades 10, 11, 12 (IDOE # 4260)**

#### **\*\*\* DUAL CREDIT OPPORTUNITY\*\*\***

Advanced Fine Arts, College Credit is a title covering any advanced course in fine arts (Music Appreciation for MCHS) offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school or any other postsecondary fine arts course offered for dual credit. **2 credit, 2 semester course. Indiana College Core Course: HUMA 118**

### **BEGINNING CHORUS - Grades 9, 10, 11, 12 (IDOE # 4182)**

These courses meet only in the fall semester of the school year. This course is a mixed chorus that provides a beginning development of quality repertoire in various styles of literature. The chorus will perform at many contests and concerts. Attendance is expected at all contests, concerts and rehearsals. Out-of-school time is required in this class during the school year. This course may be repeated all four years for credit. **1 credit, 1 semester course. May be repeated for credits.**

### **INTERMEDIATE CHORUS - Grades 9, 10, 11, 12 (IDOE # 4186)**

These courses meet only in the spring semester of the school year. This course is a mixed chorus that provides an intermediate development of quality repertoire in various styles of literature. The chorus will perform at many contests and concerts. Attendance is expected at all contests, concerts and rehearsals. Out-of-school time is required in this class during the school year. This course may be repeated all four years for credit. **1 credit, 1 semester course. May be repeated for credits.**

### **ELITE - Grades 9, 10, 11, 12 (IDOE # 4188)**

Advanced chorus will incorporate music with dance and will perform at many contests and concerts. Auditions are required. Attendance is expected at all contests, concerts and rehearsals. Out-of-school time is required in this class during the school year. This course may be repeated all four years for credit. **1 credit, 1 semester course. May be repeated for credits.**

### **BEGINNING/ INTERMEDIATE CONCERT BAND - Grades 9, 10, 11, 12 (IDOE #4160 & 4168)**

Beginning/ Intermediate Concert Band is designed as an introduction to a wide repertoire of ensemble and solo performance abilities including sight-reading, analysis, listening, improvisation along with the performance and appreciation of a variety of musical styles and forms. The students in this class will work towards performances in the community and in ISSMA. This ensemble is open to ALL Band students that do not get accepted into the Advanced Concert Band. The ensemble will play 9th-10th grade level music. Students will aim their goals towards being able to play in the Advanced Concert Band in future years. Performances include: Veteran's Day, Christmas at Madison, Festival Concert, ISSMA Concert Contest, Spring Pops, and Graduation. This course may be repeated all four years for full credit. **Prerequisite: Successful completion of the 8th grade band or an audition with the band director. 1 credit, 1 semester course. May be repeated for up to 8 credits.**



**ADVANCED CONCERT BAND – Grades 10, 11, 12 (IDOE #4170)**

This course is the top instrumental ensemble at MCHS. Students will be invited to play in this ensemble, based off of previous years' performance and behavior, by the Director of Bands. This course is open to all grades, however it will mostly consist of 11th and 12th grade students. This ensemble will perform upper level high school and collegiate repertoire. \*This ensemble is for high ability instrumental students. Performances include: Veteran's Day, Christmas at Madison, Festival Concert, ISSMA Concert Contest, Spring Pops, Graduation. **Prerequisite: Invitation from Director of Bands. 2 credit, 2 semester course.**

**JAZZ ENSEMBLE – Grades 9, 10, 11, 12 (IDOE # 4164)**

*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. \*Students are required to be enrolled in one of the two Concert Band courses, unless authorized by the Director of Bands. Freshmen can join by permission from the Director of Bands. Performances include: Chautauqua, Christmas at Madison, Festival Concert, ISSMA Jazz Contest, Spring Pops. This ensemble is also available to be booked in the Community as permitted by the MCS Bands Calendar. **1 credit, 1 semester course. May be repeated for credits.**

**PIANO AND ELECTRONIC KEYBOARD – Grades 9, 10, 11, 12 (IDOE # 4204)**

Students taking this course are offered keyboard classes in order to develop music proficiency and musicianship. Students perform with proper posture, hand position, fingering, rhythm, and articulation; compose and improvise melodic and harmonic material; create and perform simple accompaniments; listen to, analyze, sight-read, and study a variety of keyboard literature; study the elements of music as exemplified in a variety of styles; and make interpretive decisions. **1 credit, 1 semester course. May be repeated for up to 8 credits.**

**AP MUSIC THEORY – Grades 10, 11, 12 (IDOE # 4210)**

Music Theory is intended for secondary school students who have completed music studies comparable to a first-year college course in music theory. The guidelines for the course that are published by The College Board may not match any particular college program, but they do reflect the coverage of content and level of skills typical of most first-year college courses. This course should integrate aspects of melody, harmony, texture, rhythm, form, musical analysis, elementary composition, and history, and style. The student's ability to read and write musical notation is fundamental to this course, and it is also assumed that the student has acquired at least basic performance skills in voice or on an instrument. A comprehensive description of this course can be found on the College Board AP Central Course Description web page at:

<http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html>. **2 credit, 2 semester course.**

**DANCE CHOREOGRAPHY: BALLET, MODERN, JAZZ, OR ETHNIC-FOLK – Grades 9, 10, 11, 12 (IDOE # 4142)**

*Dance Choreography* is based on the Indiana Academic Standards for Dance. Learning activities in choreography are sequential and systematic and allow students to express themselves. A wide variety of materials and experiences are used in order to provide students with the knowledge, skills, and appreciation of the multi-styled and multicultural dance expressions. Choreographic activities provide students opportunities to participate in roles as a soloist, a choreographer or leader, and in a subject role. Students also explore a wide variety of choreographic philosophies as well as administrative and media skills necessary for the promotion and documentation of works to be performed. Students experience and learn to use appropriate terminology to describe, analyze, interpret, and critique dance compositions by professional individuals or companies. **1 credit, 1 semester course. May be repeated for credits.**

**SPECIAL CURRICULAR OPPORTUNITIES****ADVANCEMENT VIA INDIVIDUAL DETERMINATION (AVID) - Grades 9, 10, 11, 12 (IDOE # 0522)**

Through tutorials and a national award-winning prescribed curriculum, this class prepares students for college. Cornell note-taking, time management, inquiry skills, writing-to-learn strategies and other learning strategies comprise the components of AVID which are practiced in the other courses which the students take. Students maintain a binder and commit to doing required homework in order to achieve success in all courses. Students must have average to high test scores and grades. **Prerequisite: Meet test and grade standards, receive recommendations from teachers and counselors, and participate in an interview. Students and parents sign a contract. 2 credit, 2 semester course.**

**JAG (Jobs for America's Grads) – Grades 11, 12 (IDOE # 0509)**

JAG is a National and State school-to-career transition program for high school juniors and seniors. The primary mission of this classic JAG Model program is to keep young people in high school through graduation and to provide an array of counseling, employability skills development, career association, job development, and job placement services that will result in either a quality job leading to a career after graduation and/or enrollment in a postsecondary education and training program. **2 credit, 2 semester course.**

**COMPUTER TECHNOLOGY SUPPORT – Grades 9, 10, 11, 12 (IDOE # 5230)**

Assist the Technology Department with Computer Technical Support. *Must complete an application and be accepted into the program.* **2 credit, 2 semester course. May be repeated for up to 6 credits.**

## **SELECT PLACE**

### **SELECT PLACE – Grades 9, 10, 11, 12**

Select PLACE (Personalized Learning Academy for Connected Education) incorporates four core areas (English, Science, Social Studies, and Math), as well as Spanish I and II, at individual student need and readiness. Through short seminars, workshops, and individual exploration, students will build on the four core content areas learned in junior high with student choice on subject matter and timeline. Select teachers work individually with students to provide a personalized approach to each student's needs and learning style. Teachers provide instruction that accommodate a variety of learning preferences. The classroom environment is designed to engage students, foster discussion, and take advantage of the numerous possibilities that technology has to offer in the teaching and learning process. Select's primary purpose is to provide a personalized educational experience, through student, teacher, and peer collaboration, in order to develop self-directed and internally motivated lifelong learners. **Application and teacher recommendation are required for admittance. (4-12 credits per year, credit upon completion of subject matter)**

## **COURSES OFFERED IN SELECT**

Courses without descriptions in the SELECT PLACE section, can be located in this curriculum guide within their core content areas with complete course description.

## **SELECT ENGLISH/LANGUAGE ARTS**

All courses fulfill an English / Language Arts requirement for all diplomas unless otherwise specified.

### **ENGLISH I, II, III, IV (Equate to English 9, 10, 11, & 12) (IDOE # 1002, 1004, 1006, & 1008)**

**ENGLISH 9 HONORS / PRE -AP (IDOE# 1002)**

**CREATIVE WRITING (IDOE # 1092)**

**DEVELOPMENTAL READING (IDOE # 1120)**

**ETYMOLOGY (IDOE # 1060)**

### **COMPOSITION – Grade 11, 12 (IDOE # 1090)**

Composition 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. Students read classic and contemporary literature or articles and use appropriate works as models for writing. Students focus on the synthesis of information through analysis of text, researching, and argumentative writing. This course is a preparatory course for students wishing to attend a traditional college or university. **Prerequisite English I & II. 1 credit, 1 semester course.**

### **ADVANCED COMPOSITION – Grade 11, 12 (IDOE # 1098)**

Advanced Composition is a study and application of rhetorical writing strategies of exposition, and persuasion. Students write expository critiques of nonfiction selections, literary criticism of fiction selections, argumentative compositions using research. This course requires an Advanced Composition portfolio to complete the course. This course is a preparatory course for students wishing to attend a traditional college or university. **Prerequisite English I & II, Composition. 1 credit, 1 semester course.**

### **EXPOSITORY WRITING – Grade 11, 12 (IDOE # 1094)**

Expository Writing 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. This course requires a portfolio to complete the course. This course is a preparatory course for students wishing to attend a traditional college or university. **Prerequisite English I & II, Composition. 1 credit, 1 semester course.**

### **SHORT STORIES – Grade 10, 11, 12 (IDOE # 1046)**

Short Stories is a study of the distinct features of the short story, such as being tightly focused narrative fiction. The course may be organized by historical periods, themes, or authors. Students examine short stories with modernist and contemporary themes by a variety of authors from the perspective of audience, purpose, and historical development. **Prerequisite English I. Students may be enrolled in English II concurrently. 1 credit, 1 semester course.**

### **GRAMMAR – Grade 9, 10, 11, 12 (IDOE # 1062)**

Grammar, a course based on the Indiana Academic Standards for English/Language Arts, is a study of the English language system. Students examine and apply the conventions of oral and written expression that include syntax, usage, punctuation, and spelling. Students learn grammatical terminology, study grammar in the context of reading and writing, and apply grammatical concepts in writing and speaking. **Students may be enrolled in any of the English courses concurrently. 1 credit, 1 semester course.**

### **CRITICAL THINKING & ARGUMENTATION – Grade 11, 12 (IDOE # 1074)**

Critical Thinking and Argumentation 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 inquiries, 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 reason), represent a clear point of view, and involve evidence of support (data, examples, anecdotes, documents, information from a variety of sources). **Prerequisite English I & II or teacher recommendation. Students may be enrolled in any of the English courses concurrently. 1 credit, 1 semester course.**

### **CRITICAL THINKING & ARGUMENTATION II – Grade 11, 12 (IDOE # 1074)**

Critical Thinking and Argumentation 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 reason), represent a clear point of view, and involve evidence of support (data, examples, anecdotes, documents, information from a variety of sources). **Prerequisite Critical Thinking and Argumentation. Students may be enrolled in any of the English courses concurrently. It is strongly encouraged for students to follow this course immediately with Composition. 1 credit, 1 semester course.**

## **SELECT MATHEMATICS**

<b>ALGEBRA I</b>	<b>(IDOE # 2520)</b>
<b>GEOMETRY</b>	<b>(IDOE # 2532)</b>
<b>GEOMETRY HONORS</b>	<b>(IDOE # 2532)</b>
<b>ALGEBRA II</b>	<b>(IDOE # 2522)</b>
<b>ALGEBRA II HONORS</b>	<b>(IDOE # 2522)</b>
<b>CCR BRIDGE MATH</b>	<b>(IDOE # 2514)</b>

### **INTEGRATED MATHEMATICS I – Grade 9, 10, 11, 12 (IDOE # 2554)**

Integrated Mathematics I formalizes and extends the mathematics students learned in the middle grades. The critical areas deepen and extend understanding of linear relationships, in part by contrasting them with exponential phenomena, and in part by applying linear models to data that exhibit a linear trend. Integrated Mathematics I use properties and theorems involving congruent figures to deepen and extend understanding of geometric knowledge from prior grades. The final unit in the course ties together the algebraic and geometric ideas studied. 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. **2 credit, 2 semester course. Counts as a Mathematics Course for all diplomas. Fulfills the Algebra I/Integrated Mathematics I requirement for all diplomas.**

### **INTEGRATED MATHEMATICS II – Grade 9, 10, 11, 12 (IDOE # 2556)**

Integrated Mathematics II focuses on quadratic expressions, equations, and functions; by comparing their characteristics and behavior to those of linear and exponential relationships from Integrated Mathematics I. The need for extending the set of rational numbers arises and real and complex numbers are introduced so that all quadratic equations can be solved. The link between probability and data is explored through conditional probability and counting methods, including their use in making and evaluating decisions. The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships. Circles, with their quadratic algebraic representations, rounds out the course. 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. **2 credit, 2 semester course. Counts as a Mathematics Course for all diplomas. Fulfills the Algebra I/Integrated Mathematics I requirement for all diplomas.**

### **INTEGRATED MATHEMATICS III – Grade 9, 10, 11, 12 (IDOE # 2558)**

Integrated Mathematics III provides students the opportunity to pull together and apply the accumulation of learning that they have from their previous courses. They apply methods from probability and statistics to draw inferences and conclusions from data. Students expand their repertoire of functions to include polynomial, rational, and radical functions. They expand their study of right triangle trigonometry to include general triangles. Finally, students bring together all of their experiences with functions and geometry to create models and solve contextual problems. 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. **2 credit, 2 semester course. Counts as a Mathematics Course for all diplomas. Fulfills the Algebra I/Integrated Mathematics I requirement for all diplomas.**

## **SELECT SCIENCE**

**BIOLOGY (IDOE # 3024)**  
**INTEGRATED-CHEMISTRY AND PHYSICS (IDOE # 3108)**  
**CHEMISTRY (IDOE # 3064)**  
**CHEMISTRY I HONORS (IDOE #3064)**  
**\*\*\*CHEMISTRY II\*\*\*DUAL CREDIT OPPORTUNITY\*\*\*(IDOE # 3066 )**

### **ADVANCED SCIENCE, SPECIAL TOPICS – Grade 11, 12 (IDOE # 3092)**

*Advanced Science, Special Topics* is any science course which is grounded in extended laboratory, field, and literature investigations into one or more specialized science disciplines, such as anatomy/physiology, astronomy, biochemistry, botany, ecology, electromagnetism, genetics, geology, nuclear physics, organic chemistry, etc. Students enrolled in this course engage in an in-depth study of the application of science concepts, principles, and unifying themes that are unique to that particular science discipline and that address specific technological, environmental or health-related issues. Under the direction of a science advisor, students enrolled in this course will complete an end-of-course project and presentation, such as a scientific research paper or science fair project, integrating knowledge, skills, and concepts from the student's course of study. Individual projects are preferred, but group projects may be appropriate if each student in the group has specific and unique responsibilities. **Prerequisite Chemistry. 1 credit, 1 semester course, may be offered for successive semesters.**

### **ENVIRONMENTAL SCIENCE - Grade 9, 10, 11, 12 (IDOE # 3010)**

Environmental Science is an interdisciplinary course that integrates biology, earth science, chemistry, and other disciplines. Students enrolled in this course conduct in-depth scientific studies of: environmental systems; flow of matter and energy; natural disasters; environmental policy; biodiversity; population; pollution; natural and anthropogenic resource cycles. Students formulate, design, and carry out laboratory and field investigations as an essential course component. Students completing Environmental Science, acquire the essential tools for understanding the complexities of national and global environmental systems. **Prerequisite Environmental Science. 2 credit, 2 semester course. Fulfills Core 40 science (life) course requirement for all diplomas.**

### **PHYSICS - Grade 10, 11, 12 (IDOE # 3084)**

Physics I is a course focused on the following core topics: constant velocity; constant acceleration; forces; energy; linear momentum in one dimension; simple harmonic oscillating systems; mechanical waves and sound; simple circuit analysis. 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. **Prerequisite Algebra I or II. 2 credit, 2 semester course. Fulfills science (physical) course requirement for all diplomas.**

## **SELECT SOCIAL STUDIES**

**WORLD HISTORY (IDOE # 1548)**  
**UNITED STATES HISTORY (IDOE # 1542)**  
**ECONOMICS (IDOE # 1514)**  
**GOVERNMENT (IDOE # 1540)**  
**CURRENT PROBLEMS, ISSUES, AND EVENTS (IDOE #1512)**

### **TOPICS IN HISTORY - Grades 11, 12 (IDOE # 1538)**

Topics in History provides students the opportunity to study specific historical eras, events, or concepts. Development of historical research skills using primary and secondary sources is emphasized. The course focuses on one or more topics or themes related to United States or world history. Examples of topics might include: (1) twentieth- century conflict, (2) the American West, (3) the history of the United States Constitution, and (4) democracy in history. **Prerequisite: U.S. History or World History & Civilizations.**

## **FAMILY AND CONSUMER SCIENCE COURSES**

**CULINARY ARTS & HOSPITALITY I – Grades 10, 11 (IDOE # 5440)**  
**CULINARY ARTS & HOSPITALITY II – Grade 11, 12 (IDOE #5346)**  
**INTERPERSONAL RELATIONSHIPS -Grade 9, 10, 11 (IDOE #5364)**  
**CHILD DEVELOPMENT - Grades 9, 10, 11, 12 (IDOE # 5362)**  
**NUTRITION AND WELLNESS - Grade 9, 10 (IDOE#5342)**

## **OTHER SELECT COURSES**

**PERSONAL FINANCE (IDOE # 4540)**

**INTRODUCTION TO BUSINESS (IDOE # 4518)**

**\*\*\*PRINCIPLES OF BUSINESS MANAGEMENT \*\*\* DUAL CREDIT OPPORTUNITY\*\*\* (IDOE # 4562)**

**ENTREPRENEURSHIP (IDOE # 5966)**

**\*\*\* PRINCIPLES OF MARKETING \*\*\* DUAL CREDIT OPPORTUNITY\*\*\* (IDOE #5914)**

**PREPARING FOR COLLEGE AND CAREERS (IDOE # 5394)**

## **IVY TECH COMMUNITY COLLEGE PROGRAMS**

**WELDING, TWO YEAR PROGRAM - Grades 11 (IDOE #5776) Grade 12 (IDOE # 5778)**

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. **Course will be partnership with Ivy Tech Community College – additional certifications are possible. 3 credit, 2 semester course - Course taught at ITCC 3 periods.**

**INDUSTRIAL MAINTENANCE, TWO YEAR PROGRAM - Grade 11 (IDOE #4830) Grade 12 (IDOE# 5610)**

*Technical Certificate in Industrial Technology, Industrial Mechanical Concentration*

Students will earn a thirty-four credit hour Technical Certificate in Industrial Technology, Industrial Mechanical Concentration through a partnership with Ivy Tech Community College. A peer-led employer council consisting of representatives from Jefferson County industrial maintenance employers, including Grote Industries, Arvin Sango, and Madison Precision Products will be validating the pathway curriculum. Below is an overview of the 2-year program with a paid internship during semester 4.

K-14 INDUSTRIAL MAINTENANCE COURSE SEQUENCE

<b>Technical Certificate in Industrial Technology - Industrial Mechanical Concentration</b>			
<b>Year One: (Junior Year)</b>			
<b>Year One:</b>	<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>
<b>FALL</b>	ADMF 101	Key Principles of Advanced Manufacturing	3
<b>Semester One</b>	ADMF 102	Technology in Advanced Manufacturing	3
	INDT 113	Basic Electricity	3
	INDT 114	Introductory Welding	3
<b>Year One:</b>	INDT 104	Fluid Power Basics	3
<b>SPRING</b>	INDT 203	Machine Maintenance and Installation	3
<b>Semester Two</b>	IVYT 113	Student Success in Technology	1
<b>Year Two: (Senior Year)</b>			
<b>Year Two:</b>	<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hours</b>
<b>FALL</b>	ADMF112	Automation - Mechatronics Mechanical Systems	3
<b>Semester Three</b>	ADMF222	Automation - Mechatronics Pressurized Systems	3
	MATH 122	Applied Technical Mathematics	3
<b>Year Two:</b>	MTTC 101	Introduction to Machining	3
<b>SPRING</b>	COMM 104	Tech Communications	3
<b>Semester Four</b>		✦ Paid Internship	

**CERTIFIED NURSING ASSISTANT, ONE SEMESTER PROGRAM - Grade 11, 12 (HLHS 107) (IDOE #5284)**

Students will complete five credit hours of post-secondary coursework preparing students for the Certified Nursing Assistant licensure examination. Students will have classwork 2 days a week and 1 clinical day per week. The students are encouraged to take PSYCH 101 during this time as well to help assist in "stacking" their credits as they pursue other possible healthcare fields.

**MEDICAL ASSISTING, ONE YEAR PROGRAM - Grade 11, 12 (# 5274)**

The Medical Assisting program at Ivy Tech offers exciting, hands-on learning where student simulations are as "real-life" as possible. Students in the program get to learn from faculty who are credentialed and have real experience in the field. In addition, students have the opportunity to participate in an externship in the community. **Complete One Year Medical Assisting Technical Certificate (33 credits).**

**BUSINESS ADMINISTRATION - Grade 11, 12**

The principles taught through the Ivy Tech Business Administration program are threaded in all industries including non-profit business and education. Students will be creating marketing plans, budgets, building personal websites, simulations, case-studies and creating community connections. The Business Administration program at Ivy Tech also partners with many local businesses to give students the experience and exposure in the business world that they will need to be successful. **Students could earn Business Administration Technical Certificate ( 31 Credits).**

**INFORMATION TECHNOLOGY, TWO YEAR PROGRAM - Grade 11 (IDOE #5251 and # 5236) Grade 12**

Students will earn a twenty-three credit hour Certificate in Information Technology through partnership with Ivy Tech Community College. In addition to the institutional certificate, national certifications include CompTIAA: A+ and Microsoft Technology Associate: Database Fundamentals and Windows Server Administration Fundamentals.

# Rough Draft Schedule Sheet

## Things to remember when creating your schedule:

- Include any course that needs to be retaken.
- World Language (3 years) is required if you're earning an Academic Honors Diploma, and many 4-year colleges recommend or require 1-2 years.
- Two credits in fine arts is required if you are earning an Academic Honors Diploma.
- What is your Career Academic Sequence?
- Include dual credits or advanced placement (AP) courses for Academic Honors

1. \_\_\_\_\_ (English/ Language Arts?)

2. \_\_\_\_\_ (Math?)

3. \_\_\_\_\_ (Science?)

4. \_\_\_\_\_ (Social Studies?)

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

Alternate: \_\_\_\_\_

Alternate: \_\_\_\_\_

Alternate: \_\_\_\_\_