

Jac-Cen-Del Junior Senior High School

Course Curriculum Guide

2023-2024

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English/Language Arts***Reading: General*****DEVELOPMENTAL READING*****1120 (DEV READING)***

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.

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester, 8 credits maximum. This course allows for successive semesters of instruction for students who need additional support in vocabulary development and reading comprehension.
- Counts as an elective for all diplomas

ENGLISH 9***1002 (ENG 9)***

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

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

ENGLISH 9 HONORS***1002H (ENG 9 H)***

*Schools may designate a course *Honors* when the course content is significantly more rigorous than the state approved course. Honors level courses must be based on the Indiana Academic Standards, have defined criteria for student admission to the course as well as clear expectations of student outcomes. Honors level courses must include a culminating Honors project that reflects understanding of the Honors course content. The course description should reflect the Honors nature of the course, and course titles should include an “H” or the word “Honors” in the title.

- Prerequisite: “B” or higher in English 8, Teacher recommendation

ENGLISH 10***1004 (ENG 10)***

English 10, an integrated English course based on the Indiana Academic Standards for English/Language Arts in Grades 9- 10, is a study of language, literature, composition, and oral communication, focusing on literature

with an appropriate level of complexity for this grade band. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance in classic and contemporary literature balanced with nonfiction. Students write responses to literature, expository (informative) and argumentative/persuasive compositions, and sustained research assignments. Students deliver grade-appropriate oral presentations with attention to audience and purpose and access, analyze, and evaluate online information.

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

ENGLISH 10 HONORS

1004H (ENG 10 H)

*Schools may designate a course *Honors* when the course content is significantly more rigorous than the state approved course. Honors level courses must be based on the Indiana Academic Standards, have defined criteria for student admission to the course as well as clear expectations of student outcomes. Honors level courses must include a culminating Honors project that reflects understanding of the Honors course content. The course description should reflect the Honors nature of the course, and course titles should include an “H” or the word “Honors” in the title.

- Prerequisite: “B” or higher in English 9, Teacher recommendation

ENGLISH 11

1006 (ENG 11)

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

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

ENGLISH 11 HONORS/ENGL 111 IVY TECH

1006H (ENG 11 H)

*Schools may designate a course *Honors* when the course content is significantly more rigorous than the state approved course. Honors level courses must be based on the Indiana Academic Standards, have defined criteria for student admission to the course as well as clear expectations of student outcomes. Honors level courses must include a culminating Honors project that reflects understanding of the Honors course content. The course description should reflect the Honors nature of the course, and course titles should include an “H” or the word “Honors” in the title.

- Prerequisite: “B” or higher in English 10, Teacher recommendation

ENGLISH 12**1008 (ENG 12)**

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

- Recommended Grade Level: 12
- Recommended Prerequisites: English 9, English 10, and English 11 or teacher recommendation
- Credits: 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

ENGLISH 12 HONORS/ENGL 111 IVY TECH**1008H (ENG 12 H)**

*Schools may designate a course *Honors* when the course content is significantly more rigorous than the state approved course. Honors level courses must be based on the Indiana Academic Standards, have defined criteria for student admission to the course as well as clear expectations of student outcomes. Honors level courses must include a culminating Honors project that reflects understanding of the Honors course content. The course description should reflect the Honors nature of the course, and course titles should include an “H” or the word “Honors” in the title.

- Prerequisite: “B” or higher in English 11, Teacher recommendation

**ADVANCED ENGLISH/LANGUAGE ARTS, COLLEGE CREDIT
ENGL 206/ENGL 223 IVY TECH****1124L (ADV ENG CC/ENGL 206 AND ENGL 223)**

Advanced English/Language Arts, College Credit, is an advanced course based on the Indiana Academic Standards for English/Language Arts in grades 11 and 12. This course title covers any English language and composition advanced course offered for credit by an accredited post-secondary institution through an adjunct agreement with a secondary school.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: English 9 and English 10 or other literature, language, composition, and speech courses or teacher recommendation
- Credits: 1 semester course, 1 credit per semester. May be offered for successive semesters
- Fulfills an English/Language Arts requirement for all diplomas
- Courses that use this title are most often those taught through the post-secondary campus, taught either online or in traditional settings or a combination; and/or taught by higher education faculty.
- Courses that use this title are those that do not meet specific high school standards for a corresponding high school course, as they are standards beyond what is taught in the high school.

Language Studies**LANGUAGE ARTS LAB****1010 (LANG LAB)**

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

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 to 8 credits. This course allows for successive semesters of instruction for students who need additional support in any or all aspects of the writing standards.
- Counts as an elective for all diplomas

Journalism and Media Studies**JOURNALISM****1080 (JOURNALISM)**

Journalism, a course based on the Indiana Academic Standards for English/Language Arts and the Indiana High School Journalism Standards, is a study of news elements, journalism history, First Amendment law, ethics, act, and opinion, copy editing, news, and features as they apply to print and digital media products. It includes a comparison study of journalistic writing to other types of English writing with practical application of news, features, editorials, reviews, columns, and digital media writing forms. For the second credit: Students continue to develop journalistic writing skills in addition to studying graphic design, advertising, public relations, photojournalism and emerging media development and design. By the end of the semester, students write, shoot, and design stories for print and digital media products.

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 or 2 semester course, 1 credit per semester. Second credit may be subtitled Advanced to allow for a successive semester of instruction at an advanced level.
- English/Language Arts credit (1080): Journalism course work addresses the Indiana Academic Standards for English/Language Arts, the credits accrued can be counted as part of the eight (8) required English/Language Arts credits for all diplomas.
- Counts as an elective for all diplomas
- NOTE: This is not a student publications course. The designated school newspaper or yearbook course is Student Media (1086).

STUDENT MEDIA YEARBOOK/NEWSPAPER**1086 (STDNT MEDIA YEARBOOK)****1086J (STDNT MEDIA NEWSPAPER)**

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

communications, writing, or related fields.

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: Journalism, Digital Media, or teacher recommendation
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at advanced levels. May be offered over three or four years by subtitling the course Beginning, Intermediate, or Advanced.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills the Fine Arts requirement for the Core 40 with Academic Honors.

NOTE: This is the designated School Media course, including newspaper and yearbook.

DIGITAL MEDIA

(offered on a rotation)

1084 (Digital Media)

Digital Media, a course based on the Indiana Academic Standards for English/Language Arts and Media Literacy Standards, is a study of media literacy and production skills. This course examines the impact of informational, narrative, and persuasive media on everyday life. This course will focus on changes in media and includes practice in broadcast journalism, audio/visual storytelling, multimedia storytelling, as well as different platforms such as online and social media. Students will analyze local, national, and global media through the lens of law, ethics, and social responsibility. Students use course content to become knowledgeable consumers and producers of media. For the second credit: Students continue to develop media production skills in addition to continuing critical media analysis. By the end of the semester, students write and produce media projects.

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Credits: 1 or 2 semester course, 1 credit per semester. Second credit may be subtitled Advanced to allow for a successive semester of instruction at an advanced level.

-English/Language Arts credit (1084): Digital Media course work addresses the Indiana Academic Standards for English/Language Arts, credits accrued can be counted as part of the eight (8) required English/Language Arts credits for all diplomas.

Reading: Informational Text

BIOGRAPHIES

(offered on a rotation)

1024 (BIOGRAPHIES)

Biographies, a course based on the Indiana Academic Standards for English/Language Arts, is a study of outstanding examples of biographical literature from various historical eras, cultures, and authors (both men and women). Students examine autobiographies, legendary narratives of historical figures, and hagiographies (venerated persons). Students analyze works written for different purposes, such as moralistic, inspirational, entertainment, and cautionary. Students analyze the assumptions of the author and the relationship between the author and the subject of the biography in order to determine reliability and validity of the work. Course can be offered in conjunction with a composition course, or schools may embed Indiana Academic Standards for English/Language Arts writing standards within curriculum.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: English 9, English 10, or teacher recommendation
- Credits: 1 semester course, 1 credit per semester

- Fulfills an English/Language Arts requirement for all diplomas

FILM LITERATURE

(offered on a rotation)

1034 (FILM LIT)

Film Literature, a course based on the Indiana Academic Standards for English/Language Arts, is a study of how literature is adapted for film or media and includes role playing as film directors for selected screen scenes. Students read about the history of film, the reflection or influence of film on the culture, and issues of interpretation, production and adaptation. Students examine the visual interpretation of literary techniques and auditory language in film and the limitations or special capacities of film versus 177 Indiana Department of Education High School Course Titles and Descriptions text to present a literary work. Students analyze how films portray the human condition and the roles of men and women and the various ethnic or cultural minorities in the past and present. Course can be offered in conjunction with a composition course, or schools may embed Indiana Academic Standards for English/Language Arts writing standards within curriculum.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: English 9, English 10, or teacher recommendation
- Credits: 1 course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

GENRES OF LITERATURE

(offered on a rotation)

1036 (GENRES LIT)

Genres of Literature, a course based on the Indiana Academic Standards for English/Language Arts, is a study of various literary genres, such as poetry, dramas, novels, short stories, biographies, journals, diaries, essays, and others. Students examine a set or sets of literary works written in different genres that address similar topics or themes. Students analyze how each genre shapes literary understanding or experiences differently, how different genres enable or constrain the expression of ideas, how certain genres have had a stronger impact on the culture than others in different historical time periods, and what the most influential genres are in contemporary times. Course can be offered in conjunction with a composition course, or schools may embed Indiana Academic Standards for English/Language Arts writing standards within curriculum.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: English 9, English 10, or teacher recommendation
- Credits: 1 or 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

INDIANA LITERATURE

(offered on a rotation)

1038 (IND LIT)

Indiana Literature, a course based on the Indiana Academic Standards for English/Language Arts, is a study of works produced by those who were born in, raised, or lived most of their lives in Indiana and works about Indiana or its famous persons. Students examine representative works of various historical periods, works from the various literary movements, and works that reflect unique aspects of Indiana culture. Students analyze and evaluate contributions of Indiana literature to specific genres and to the body of American literature or media in the past and present. Course can be offered in conjunction with a composition course, or schools may embed Indiana Academic Standards for English/Language Arts writing standards within curriculum.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: English 9, English 10, or teacher recommendation
- Credits: 1 or 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

THEMES IN LITERATURE

(offered on a rotation)

1048 (THEMES LIT)

Themes in Literature, a course based on the Indiana Academic Standards for English/Language Arts, is a study of universal themes, such as the journey of the hero, the trials of youth, the search for identity, and other themes appropriate to the level and interests of students. The course may be limited to a few important related themes. Students examine representative works in various genres by authors of diverse eras and nationalities and the way themes may be treated differently in the works because of the cultural context. Students analyze how themes illuminate humanity's struggle to understand the human condition. Course can be offered in conjunction with a composition course, or schools may embed Indiana Academic Standards for English/Language Arts writing standards within curriculum.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: English 9, English 10, or teacher recommendation
- Credits: 1 or 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

Speech Studies

DEBATE

(offered on a rotation)

1070 (DEBATE)

Debate, a course based on the Indiana Academic Standards for English/Language Arts, is the study and application of the basic principles of debate involving support for the basic types of arguments (induction, deduction, causation) and debate strategies (affirmative or negative argument construction and extension, case development, refutation or rebuttal of argument claims and evidence, and persuasive speaking).

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Speech or teacher recommendation
- Credits: 1 or 2 semester course, 1 credit per semester. The nature of this course allows for the second semester of instruction at an advanced level.
- 1 credit fulfills an English/Language Arts requirement for all diplomas, additional credits fulfill elective credit for all diplomas

SPEECH**1076 (SPEECH)**

Speech, a course based on the Indiana Academic Standards for English/Language Arts, is the study and application of the basic principles and techniques of effective oral communication. Students deliver focused and coherent speeches that convey clear messages, using gestures, tone, and vocabulary appropriate to the audience and purpose. Students deliver different types of oral and multimedia presentations, including viewpoint, instructional, demonstration, informative, persuasive, and impromptu. Students use the same Standard English conventions for oral speech that they use in their writing.

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: None
- Credits: 1 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

ADVANCED COMPOSITION/ENGL 215 IVY TECH**1098 (ADV COMP/ENGL 215)**

Advanced Composition, a course based on the Indiana Academic Standards for English/Language Arts, is a study and application of the rhetorical writing strategies of exposition and persuasion. Students write expository critiques of nonfiction selections, literary criticism of fiction selections, persuasive compositions, and research reports in addition to other appropriate writing tasks. Course can be offered in conjunction with a literature course, or schools may embed Indiana Academic Standards for English/Language Arts reading standards within curriculum.

- Recommended Grade: 11, 12
- Recommended Prerequisites: English 9, English 10, Composition, or teacher recommendation
- Credits: 1 or 2 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

ADVANCED ENGLISH/LANGUAGE ARTS, COLLEGE CREDIT/IU COLL P155**1124SP (ADV ENG CC/COLL P155)**

Advanced English/Language Arts, College Credit, is an advanced course based on the Indiana Academic Standards for English/Language Arts in grades 11 and 12. This course title covers any English language and composition advanced course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school.

P155 Public Speaking (3 cr.) (There is a \$39.00 learning resources charge for every student sitting in the classroom, regardless of college credit enrollment status.)

Prereq: Senior standing (or terminal year) or Junior standing and a high school speech class. Prepares students in the liberal arts to communicate effectively with public audiences. Emphasizes oral communication as practiced in public contexts: how to advance reasoned claims in public; how to adapt public oral presentations to particular audiences; how to listen to, interpret, and evaluate public discourse; and how to formulate a clear response. Credit given for only one of P155, CMCL-C 121, or SPCH-S121. P155/S121 class size is capped at 24 students, regardless of how many are taking the course for college credit.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: English 10 and high school speech course, or English 11
- Required Prerequisite: 2.7 gpa

- Credits: 1 semester course, 1 credit per semester. May be offered for successive semesters
- Fulfills an English/Language Arts requirement for all diplomas

Writing and Composition Studies

CREATIVE WRITING (offered on a rotation)

1092 (CREAT WRIT)

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

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: English 9, English 10, or teacher recommendation
- Credits: 1 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

Fine Arts Department

STUDENT MEDIA YEARBOOK/NEWSPAPER

1086 (STDNT MEDIA YEARBOOK)

1086J (STDNT MEDIA NEWSPAPER)

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

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: Journalism, Digital Media, or teacher recommendation
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at advanced levels. May be offered over three or four years by titling the course Beginning, Intermediate, or Advanced.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills the Fine Arts requirement for the Core 40 with Academic Honors.

NOTE: This is the designated School Media course, including newspaper and yearbook.

INTRODUCTION TO TWO-DIMENSIONAL ART (L)

4000 (2D ART)

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

outcomes, and revise their work; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. They identify ways to utilize and support art museums, galleries, studios, and community resources.

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

INTRODUCTION TO THREE-DIMENSIONAL ART (L)

4002 (3D ART)

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

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: Introduction to Two-Dimensional Art (L)
- Credits: 1 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory Course

ADVANCED TWO-DIMENSIONAL ART (L)

4004 (ADV 2D ART)

4004P (ADV 2D PUBLIC ART)

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

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: Introduction to Two-Dimensional Art (L)
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory Course

ADVANCED THREE-DIMENSIONAL ART (L)**4006 (ADV 3D ART)**

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

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: Introduction to Two-Dimensional Art (L), Introduction to Three-Dimensional Art (L)
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory Course

CERAMICS (L)**4040 (CERAMICS)****4040A (ADV CERAMICS)**

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

- Recommended Grade: 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Two-Dimensional Art (L), Introduction to Three-Dimensional Art
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory Course

AP DRAWING**4048 (ART DRP AP)**

AP Drawing is a course established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. The AP Studio Art Program consists of three portfolio exams—2-D Design, 3-D Design, and Drawing—corresponding to the college foundation courses. Portfolios allow flexibility of coursework while guiding students to produce college-level quality, artistic investigation, and breadth of work. The Drawing portfolio addresses issues such as line quality, light and shade, rendering of form, composition, surface manipulation, the illusion of depth, and mark-making. Students' portfolios demonstrate skills and ideas

developed, refined, and applied throughout the course to produce visual compositions. Students may choose to submit any or all of the portfolios. Portfolios are evaluated based on standardized scoring descriptors aligned with skills and understanding developed in college foundation courses. The portfolio will have two sections: Sustained Investigation and Selected works.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Advanced laboratory visual arts courses
- Credits: 2 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills the Fine Arts requirement for the Core 40 with Academic Honors Diploma

AP 2-D ART AND DESIGN

4050 (ART 2D AP)

AP 2-D Design is a course established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. The AP Program offers three studio art courses and portfolios: 2- Dimensional Design, 3-Dimensional Design, and Drawing. The AP Art portfolios are designed for students who are seriously interested in the practical experience of art. The portfolios correspond to most college foundation courses. Students submit portfolios for evaluation at the end of the school year. Students may choose to submit any or all of the Drawing, 2-Dimensional Design, or 3-Dimensional design portfolios. AP Art students create a portfolio of work to demonstrate the artistic skills and ideas they have developed, refined, and applied over the course of the year to produce visual compositions. The portfolio will have two sections: Sustained Investigation and Selected works

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Advanced laboratory 2-D visual arts courses
- Credits: 2 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills the Fine Arts requirement for the Core 40 with Academic Honors Diploma

AP 3-D ART AND DESIGN

4052 (ART 3D AP)

AP 3-D Design is a course established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. The AP Art Program consists of three portfolio exams—2-D Design, 3-D Design, and Drawing—corresponding to the college foundation courses. Portfolios allow flexibility of coursework while guiding students to produce college-level quality, artistic investigation, and breadth of work. The 3-D Design portfolio involves decision making about how to use the elements and principles of art as they relate to the integration of depth, space, volume, and surface, either actual or virtual. Students' portfolios demonstrate skills and ideas developed, refined, and applied throughout the course to produce visual compositions. Students may choose to submit any or all of the portfolios. Portfolios are evaluated based on standardized scoring descriptors aligned with skills and understanding developed in college foundation courses. The portfolio will have two sections: Sustained Investigation and Selected works.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Advanced laboratory 3-D visual arts courses
- Credits: 2 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills the Fine Arts requirement for the Core 40 with Academic Honors Diploma

VISUAL COMMUNICATION (L)*4086 (VIS COMM)**4086A (ADVANCED VIS COMM)*

Visual Communication is a course based on the Indiana Academic Standards for Visual Art. Students in visual communication engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works. They create print media utilizing graphic design, typography, illustration, and image creation with digital tools and computer technology. 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.

- Recommended Grade Level: 9, 10, 11, 12
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory Course

BEGINNING CONCERT BAND (L)*4160 (BEG BAND)*

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

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a directed elective or elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory course

INTERMEDIATE CONCERT BAND (L)*4168 (INT BAND)*

Intermediate Concert Band is based on the Indiana Academic Standards for High School Instrumental Music. This course includes a balanced comprehensive study of music that develops skills in the psychomotor, cognitive, and affective domains. Ensemble and solo activities are designed to develop elements of musicianship including tone production, technical skills, intonation, music reading skills, listening skills, analyzing music, studying historically significant styles of literature, and integration of other applicable

disciplines. Students study a varied repertoire of developmentally appropriate concert band literature and develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom.

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

ADVANCED CONCERT BAND (L)

4170 (ADV BAND)

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

- Recommended Grade: 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Beginning and Intermediate Concert Band
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a directed elective or elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory course

BEGINNING CHORUS

4182 (BEG CHOR)

Beginning Chorus is based on the Indiana Academic Standards for High School Choral Music. Students taking Beginning Chorus develop musicianship and specific performance skills through ensemble and solo singing. This class includes the study of quality repertoire in the diverse styles of choral literature appropriate in difficulty and range for the students. Chorus classes provide opportunities for performing, creating, and responding to music. Students develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom.

- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters

of instruction at an advanced level provided that defined proficiencies and content standards are utilized.

- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory course

ADVANCED CHORUS (L)

4188 (ADV CHOR)

Advanced Chorus is based on the Indiana Academic Standards for High School Choral Music. Students taking *Advanced Chorus* develop musicianship and specific performance skills through ensemble and solo singing. This class includes the study of quality repertoire in the diverse styles of choral literature appropriate in difficulty and range for the students. Chorus classes provide opportunities for performing, creating, and responding to music. Students develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom.

- Required Prerequisites: Audition or Teacher recommendation
- Recommended Prerequisites: Beginning Chorus
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory course

MUSIC HISTORY AND APPRECIATION

4206 (MUS HIST)

Music History and Appreciation is based on the Indiana Academic Standards for Music and standards for this specific course. Students receive instruction designed to explore music and major musical styles and periods through understanding music in relation to both Western and Non-Western history and culture. Activities include analyzing and describing music; evaluating music and music performances; and understanding relationships between music and the other arts, as well as disciplines outside of the arts.

- Recommended Grade Level: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 or 2 semester course, 1 credit per semester. The nature of this course allows for two successive semesters of instruction, provided that defined standards are utilized.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma

MUSIC THEORY AND COMPOSITION (L)

4208 (MUS THEORY)

Music Theory and Composition is based on the Indiana Academic Standards for Music and standards for this specific course. Students develop skills in the analysis of music and theoretical concepts. Students develop ear training and dictation skills, compose works that illustrate mastered concepts, understand harmonic structures and analysis, understand modes and scales, study a wide variety of musical styles, study traditional and nontraditional music notation and sound sources as tools for musical composition, and receive detailed instruction in other basic elements of music.

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 or 2 semester course, 1 credit per semester. The nature of this course allows for two successive semesters of instruction at an advanced level provided that defined proficiencies and standards are utilized.
- Counts as a directed elective or elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma
- Laboratory Course

Health and Wellness

HEALTH and WELLNESS EDUCATION

3506 (HLTH & WELL)

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

- Recommended Grade Level: 9, 10, 11, 12
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Fulfills the Health and Wellness requirement for all diploma types

Mathematics

CCR BRIDGE: MATH READY

2514 (MATH RDY)

The CCR Bridge: Math Ready course will include and reinforce the Algebra I, Geometry, Algebra II and statistics skills necessary to be ready for an entry-level college math course. This course emphasizes understanding of math concepts rather than just memorizing procedures. Math Ready students learn the context behind the procedure (e.g., why to use a certain formula or method to solve a problem). This equips them with higher-order thinking skills in order to apply math skills, functions, and concepts in different situations. The course is intended for students who currently have achieved the minimum math requirements for college entry. The content of this course is designed to enhance students’ math skills so that they are ready for college-level math assignments. It is not designed to prepare students for college level math in STEM majors.

- Recommended Grade: 12
- Required Prerequisites: None
- Recommended Prerequisites: Algebra II or Analytical Algebra II or Integrated Mathematics III
- 2 semester course, 1 credit per semester
- Fulfills a Mathematics course for all diplomas

ALGEBRA I LAB**2516 (ALG I LAB)**

Algebra I Lab is a mathematics support course for Algebra I. Algebra I Lab is taken while students are concurrently enrolled in Algebra I. This course provides students with additional time to build the foundations necessary for high school math courses, while concurrently having access to rigorous, grade-level appropriate courses. The five critical areas of Algebra I Lab align with the critical areas of Algebra I: Relationships between Quantities and Reasoning with Equations; Linear and Exponential Relationships; Descriptive Statistics; Expressions and Equations; and Quadratic Functions and Modeling. However, whereas Algebra I contains exclusively grade-level content, Algebra I Lab combines standards from high school courses with foundational standards from the middle grades.

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credit per semester
- Fulfills a Mathematics course for the General Diploma only or as an elective for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- Algebra I Lab is designed as a support course for Algebra I. As such, a student taking Algebra I Lab must also be enrolled in Algebra I during the same academic year.

ALGEBRA I**2520 (ALG I)**

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

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credit per semester
- Fulfills a Mathematics course for all diplomas
- Fulfills the Algebra I/Integrated Mathematics I requirement for all diplomas
- Students pursuing Core 40, Core 40 with Academic Honors, or Core 40 with Technical Honors diploma should receive credit for Algebra I by the end of Grade 9

ALGEBRA I HONORS**2520H (ALG I H)**

*Schools may designate a course *Honors* when the course content is significantly more rigorous than the state approved course. Honors level courses must be based on the Indiana Academic Standards, have defined criteria for student admission to the course as well as clear expectations of student outcomes. Honors level courses must include a culminating Honors project that reflects understanding of the Honors course content. The course description should reflect the Honors nature of the course, and course titles should include an “H” or the word “Honors” in the title.

ALGEBRA II**2522 (ALG II)**

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

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisite: Algebra I
- Credits: 2 semester course, 1 credit per semester
- Fulfills a Mathematics course for all diplomas
- Fulfills the Algebra II/Integrated Mathematics III requirement for all diplomas

CALCULUS/MATH 211

(online through Ivy Tech)

2527 (CALC/MATH 211)

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

- Recommended Grade: 11, 12
- Recommended Prerequisites: Pre-Calculus: Algebra and Pre-Calculus: Trigonometry
- 2 semester course, 1 credit per semester
- Fulfills a Mathematics course requirement for all diplomas

FINITE MATHEMATICS/MATH 135 IVY TECH**2530 (FINITE MATHEMATICS)**

Finite Mathematics is a collection of mathematical topics, frequently used in business or public policy contexts. It is a course designed for students who will undertake higher-level mathematics in college that may not include calculus. Finite Math is made up of five strands: Sets; Matrices; Networks; Optimization; and Probability. The skills listed in these strands indicate what students should know and be able to do in Finite Math. 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.

- Recommended Grade: 12
- Recommended Prerequisites: Algebra II or Integrated Mathematics III or Analytical Algebra II
- Credits: 1 or 2 semester course, 1 credit per semester,
- Fulfills a Mathematics course requirement for all diplomas

MATH M118 Finite Mathematics (3 cr.) P: Two years of high school algebra, one year of high school geometry, and one year of high school precalculus. Sets, counting, basic probability, including random variables and

expected values. Linear systems, matrices, linear programming, and applications.

- Required Prerequisite: C average in Trig and Precal
- Credits: 2 semester course, 1 credit per semester
- Counts as a Mathematics Course for all diplomas

GEOMETRY

2532 (GEOM)

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

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: Algebra I
- Credits: 2 semester course, 1 credit per semester
- Fulfills a Mathematics course for all diplomas
- Fulfills the Geometry/Integrated Mathematics II requirement for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

MATHEMATICS LAB

2560 (MATH LAB)

Mathematics Lab provides students with individualized instruction designed to support success in completing mathematics coursework aligned with Indiana's Academic Standards for Mathematics. Mathematics Lab is to be taken in conjunction with a Core 40 mathematics course, and the content of Mathematics Lab should be tightly aligned to the content of its corresponding course. Mathematics Lab should not be offered in conjunction with Algebra I or Integrated Mathematics I; instead, schools should offer Algebra I Lab or Integrated Mathematics I Lab to provide students with rigorous support for these courses.

- Recommended Prerequisites: none
- 1 semester course, 1 credit per semester, 8 credits maximum
- Fulfills an elective course requirement for all diplomas
- Clarifying information can be appended to the end of the course title to denote the content covered in each course. Example: Mathematics Lab used to support students in Algebra II can be recorded on the transcript as Mathematics Lab – Algebra II.

PRE-CALCULUS: ALGEBRA

2564 (PRECAL AL)

Pre-Calculus: Algebra extends the foundations of algebra and functions developed in previous courses to new functions, including exponential and logarithmic functions, and to sequences and series. The course provides students with the skills and understandings that are necessary for advanced manipulation of angles and measurement. Pre-Calculus: Algebra is made up of five strands: Functions; Quadratic, Polynomial, and Rational Equations and Functions; Exponential and Logarithmic Functions; Sequences and Series; and Conics. The course is designed for students who expect math to be a major component of their future college and career experiences, and as such it is designed to provide students with strong foundations for calculus and other higher-level math courses. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics

as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Algebra II and Geometry or Integrated Mathematics III
- 1 semester course, 1 credit per semester
- Fulfills a Mathematics course requirement for all diplomas

PRE-CALCULUS: TRIGONOMETRY

2566 ((PRE-CALC TRIG)

Pre-Calculus: Trigonometry provides students with the skills and understandings that are necessary for advanced manipulation of angles and measurement. Trigonometry provides the foundation for common periodic functions that are encountered in many disciplines, including music, engineering, medicine, finance, and nearly all other STEM disciplines. Trigonometry consists of six strands: Unit Circle; Triangles; Periodic Functions; Identities; Polar Coordinates and Complex Numbers; and Vectors. Students will advance their understanding of imaginary numbers through an investigation of complex numbers and polar coordinates. A strong understanding of complex and imaginary numbers is a necessity for fields such as engineering and computer programming. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Algebra II and Geometry or Integrated Mathematics III
- 1 semester course, 1 credit per semester
- Fulfills a Mathematics course requirement for all diplomas

BUSINESS MATH

4512 (BUS MATH)

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. Instructional strategies should include simulations, guest speakers, tours, Internet research, and business experiences.

- Recommended Grade(s): 10, 11
- Required Prerequisites: Algebra I
- Recommended Prerequisites: none
- Credits: 1 to 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

Multidisciplinary

BASIC SKILLS DEVELOPMENT

0500 (BAS SKLS)

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

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

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: None
- Credits: 1 credit per semester up to 8 semesters, 8 credits maximum
- Counts as an Elective for all diplomas

CADET TEACHING EXPERIENCE

0502 (CADET TCHG)

This elective course provides students in grades eleven (11) or twelve (12) organized exploratory teaching experiences in grades kindergarten (K) through grade nine (9). All teaching experiences should be preplanned by the high school Cadet Teaching Experience teacher-trainer and the cooperating teacher(s) who are supervising prospective teachers and providing them with pre-training experiences in one or more classes. This course provides a balance of class work relating to: (1) classroom organization, (2) classroom management, (3) the curriculum and instructional process, (4) observations of teaching, and (5) instructional experiences. Study topics and background reading provide the cadets with information concerning the teaching profession and the nature of the cadet teachers' assignments. Evaluation is based upon the cadet teachers' cooperation, day-to-day practical performance, and class work including the cadets' potential ability to teach. The total workload of the Cadet Teaching course is comparable to those for other subjects in the high school curriculum.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: None
- Credits: 1 credit per semester, up to 4 semesters, 4 credits maximum
- Cadet teaching experience for high school students is limited to grades kindergarten through grade nine
- Counts as a Directed Elective or Elective for all diplomas

JOBS FOR AMERICA'S GRADUATES (JAG)

0509 (JAG)

Jobs for America's Graduates (JAG) is a state-based, national non-profit organization dedicated to preventing dropouts among young people who are most at-risk. JAG's mission is to keep young people in school through graduation and provide work-based learning experiences that will lead to career advancement opportunities or to enroll in a postsecondary institution that leads to a rewarding career. JAG students receive adult mentoring while in school and one year of follow-up counseling after graduation. The JAG program is funded through grants provided by the Indiana Department of Workforce Development.

- Recommended Grade: 11, 12
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credits per semester, 4 credits maximum
- Counts as an elective for all diplomas

PEER TUTORING

0520 (PEER TUTR)

Peer Tutoring provides high school students with an organized exploratory experience to assist students in kindergarten through grade twelve (K-12), through a helping relationship, with their studies and personal growth and development. The course provides opportunities for the students taking the course to develop a basic understanding of individual differences and to explore career options in related fields. Peer Tutoring experiences are preplanned by the teacher trainer and any cooperating teacher under whom the tutoring is to

be provided. It must be conducted under the supervision of a licensed teacher. The course provides a balance of class work relating to the development of and use of: (1) listening skills, (2) communication skills, (3) facilitation skills, (4) decision-making skills, and (5) teaching strategies.

- Recommended Grade Level: 10, 11 or 12
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as an Elective for all diplomas

CAREER INFORMATION AND EXPLORATION

0522 (CARR INFO)

Career Information and Exploration provides students with opportunities to learn about themselves and about various traditional and nontraditional occupations and careers. Students also gain an awareness of the type of occupational preparation or training needed for various occupations and careers. Students develop skills in: (1) employability, (2) understanding the economic process, and (3) career decision making and planning. Opportunities are provided for students to observe and participate in various job situations through opportunities such as field trips, internships, mock interviews, and guest speakers. Resume development experience and career-related testing are also provided to students.

- Recommended Grade: 9, 10
- Required Prerequisites: none
- Recommended Prerequisites: Preparing for College and Careers
- Credits: 1 semester course, 1 credit per semester
- Counts as a directed elective or elective for all diplomas
- The nature of this course allows for successive semesters of instruction provided progressively advanced proficiencies and content standards are utilized.

DRIVER EDUCATION

3520 (DRIVER ED)

Driver Education provides students with the knowledge needed to assist them in developing the skills, habits, and attitudes necessary to interact safely and effectively with other highway users in a wide variety of environments, situations, and conditions. This course should always provide a combination of classroom instruction and behind-the-wheel experiences in on-street environments. Whenever possible, the on-street observations and behind-the-wheel experiences should be supplemented with off-street, multiple-car driving range and simulation experiences as listed in IAC 5116-6-7. The Driver Education course also provides for, but is not necessarily limited to, student learning related to: (1) driving skills, (2) traffic laws, (3) the laws of nature, (4) driving attitudes, (5) occupant protection, (6) the effect of physical and mental conditions of the driver, (7) vehicle purchase, (8) insurance and maintenance, (9) the ecology and energy efficiency of various transportation modes, (10) energy efficient driving techniques, and (11) sharing the roadway with other users, including motorcyclists and pedestrians.

- Recommended Grade: none
- Recommended Prerequisites: none
- Credits: 1 credit course
- Counts as an elective for all diplomas
- For any approved program, the student must complete both phases (classroom and laboratory) of the program in not more than three (3) consecutive semesters.

Physical Education**PHYSICAL EDUCATION I (L)****3542 (PHYS ED)**

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

- Recommended Grade Level: 9, 10, 11, 12
- Required Prerequisites: Grade 8 Physical Education
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Fulfills part of the Physical Education requirement for all diplomas
- Classes are co-educational unless the activity involves bodily contact or groupings based on an objective standard of individual performance developed and applied without regard to gender.
- Adapted physical education must be offered, as needed, in the least restricted environment and must be based upon an individual assessment.
- As a designated laboratory course, 25% of course time must be spent in activity.

PHYSICAL EDUCATION II (L)**3544 (PHYS ED II)**

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

- Recommended Grade Level: 9, 10, 11, 12
- Required Prerequisites: Physical Education I
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Fulfills part of the Physical Education requirement for all diplomas
- Classes are co-educational unless the activity involves bodily contact or groupings based on an objective standard of individual performance developed and applied without regard to gender.
- Adapted physical education must be offered, as needed, in the least restrictive environment and must be based upon an individual assessment.
- As a designated laboratory course, 25% of course time must be spent in activity

**ELECTIVE PHYSICAL EDUCATION (L)
(Weightlifting and Individual Fitness)****3560W (ELECT PE-Weightlifting)****3560F (ELECT PE-Ind Fitness)**

Elective Physical Education, a course based on selected standards from Indiana's Academic Standards for Physical Education, identifies what a student should know and be able to do as a result of a quality physical

education program. The goal of a physically educated student is to maintain appropriate levels of cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition necessary for a healthy and productive life. Elective Physical Education promotes lifetime sport and recreational activities and provides an opportunity for an in-depth study in one or more specific areas. A minimum of two of the following activities should be included: team sports; dual sports activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance. This course includes the study of physical development concepts and principles of sport and exercise as well as opportunities to develop or refine skills and attitudes that promote lifelong fitness. Students have the opportunity to design and develop an appropriate personal fitness program that enables them to achieve a desired level of fitness. Ongoing assessment includes both written and performance-based skill evaluation. Individual assessments may be modified for individuals with disabilities, in addition to those with IEPs and 504 plans (e.g., chronic illnesses, temporary injuries, obesity, etc.). See 511 IAC 7-27-9, 7-27-11.

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: Physical Education I and II
- Credits: 1 credit per semester, maximum of 8 credits
- Counts as an Elective requirement for all diplomas

Science

ENVIRONMENTAL SCIENCE (L)

3010 (ENVSCI)

Environmental Science is an interdisciplinary course that integrates biology, earth science, chemistry, and other disciplines. Students completing Environmental Science, acquire the essential tools for understanding the complexities of national and global environmental systems. 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. Cross-cutting concepts are an integral part of this course. Students formulate, design, and carry out laboratory and field investigations as an essential course component using the Science and Engineering Practices.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Two credits science coursework
- Credits: 2 semester course, 1 credit per semester
- Counts as an elective for all diplomas
- Fulfills a science (life) course requirement for all diplomas

AP BIOLOGY (L)

(offered on APEX)

3020 (BIO AP)

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

BIOLOGY I (L)

3024 (BIO I)

Biology I incorporates high school Disciplinary Core Ideas, Science and Engineering Practices, and Crosscutting Concepts to help students gain a three dimensional understanding of Biology topics. Disciplinary Core Ideas for this course include From Molecules to Organisms, Ecosystems, Heredity and Biological Evolution. Instruction focuses on the observation of phenomena to develop an understanding of how scientific knowledge is acquired.

- Recommended Grade: 10
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 1 credit per semester
- Fulfills the Biology requirement for all diplomas

AP CHEMISTRY

3060 (CHEM AP)

AP Chemistry 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 content includes: (1) structure of matter: atomic theory and structure, chemical bonding, molecular models, nuclear chemistry; (2) states of matter: gasses, liquids and solids, solutions; and (3) reactions: reaction types, stoichiometry, equilibrium, kinetics and thermodynamics.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Chemistry I, Algebra II, Pre-Calculus/Trigonometry
- Credits: 2 semester course, 1 credit per semester
- Counts as a Science Course for all diplomas
- Qualifies as a quantitative reasoning course

CHEMISTRY I (L)

3064 (CHEM I)

Chemistry I incorporates high school Disciplinary Core Ideas, Science and Engineering Practices, and Crosscutting Concepts to help students gain a three dimensional understanding of Chemistry topics. Disciplinary Core Ideas for this course include Matter and its Interactions and Energy. Instruction focuses on the observation of phenomena to develop an understanding of how scientific knowledge is acquired.

- Recommended Grade: 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Algebra II (can be taken concurrently)
- Credits: 2 semester course, 1 credit per semester
- Fulfills a science (physical) course requirement for all diplomas
- Qualifies as a quantitative reasoning course

PHYSICS I (L)

3084 (PHYS I)

Physics I incorporates high school Disciplinary Core Ideas, Science and Engineering Practices, and Crosscutting

Concepts to help students gain a three dimensional understanding of Physics topics. Disciplinary Core Ideas for this course include Forces and Interactions, Energy, Wave Properties, and Electromagnetic Radiation. Instruction focuses on the observation of phenomena to develop an understanding of how scientific knowledge is acquired.

- Recommended Grade: 9, 10, 11
- Required Prerequisites: none
- Recommended Prerequisites: Algebra I or Algebra II
- Credits: 2 semester course, 1 credit per semester
- Counts as an elective for all diplomas
- Fulfills a science (physical) course requirement for all diplomas
- Qualifies as a Quantitative Reasoning course

INTEGRATED CHEMISTRY-PHYSICS (L)

3108 (ICP)

Integrated Chemistry-Physics incorporates high school Disciplinary Core Ideas, Science and Engineering Practices, and Crosscutting Concepts to help students gain a three-dimensional understanding of Chemistry and Physics topics. Disciplinary Core Ideas for this course include Matter and its Interactions, Forces, Energy, and Waves and their Applications in Technologies for Information Transfer. Instruction focuses on the observation of phenomena to develop an understanding of how scientific knowledge is acquired.

- Recommended Grade: 9
- Required Prerequisites: none
- Recommended Prerequisites: Algebra I (may be taken concurrently with this course)
- Credits: 2 semester course, 1 credit per semester
- Counts as an elective for all diplomas
- Fulfills a science (physical) course requirement for all diplomas
- Qualifies as a Quantitative Reasoning course

ANATOMY AND PHYSIOLOGY

5276 (A & P)

Anatomy & Physiology is a course in which students investigate concepts related to Health Science, with emphasis on interdependence of systems and contributions of each system to the maintenance of a healthy body. It introduces students to the cell, which is the basic structural and functional unit of all organisms, and covers tissues, integument, skeleton, 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.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Biology
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a science course requirement for all diplomas

Social Studies

ECONOMICS

1514 (ECON)

Economics examines the allocation of resources and their uses for satisfying human needs and wants. The course analyzes economic reasoning and behaviors of consumers, producers, savers, investors, workers, voters,

institutions, governments, and societies in making decisions. Students explain that because resources are limited, people must make choices and understand the role that supply, demand, prices, and profits play in a market economy. Key elements of the course include the study of scarcity and economic reasoning; supply and demand; market structures; the role of government; national economic performance; the role of financial institutions; economic stabilization; and trade.

- Recommended Grade Level: 11, 12
- Credits: 1 semester course, 1 credit per semester
- Counts as an Elective for all diplomas
- Fulfills the Economics requirement for the Core 40, Core 40 with Academic Honors, and Core 40 with Technical Honors diplomas
- Fulfills a Social Studies requirement for the General Diploma only
- Qualifies as a quantitative reasoning course

ETHNIC STUDIES

1516 (ETH STUDIES)

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.

- Recommended Grade Level: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit
- Counts as an Elective for all diplomas
- Must be offered at least once per school year

INDIANA STUDIES

1518 (IN STUDIES)

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.

- Recommended Grade Level: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester
- Must be offered at least once per school year
- Counts as an Elective for all diplomas

PSYCHOLOGY

1532 (PSYCH)

Psychology is the scientific study of mental processes and behavior. The course is divided into eight content areas: History and Scientific Method, Biological Basis for Behavior, Development, Cognition, Personality and Assessment, Abnormal Psychology, Socio-Cultural Dimensions of Behavior, and Psychological Thinking. History and Scientific Method explores the history of psychology, the research methods used, and the ethical

considerations that must be utilized. Biological Basis for Behavior focuses on the way the brain and nervous system function, including sensation, perception, motivation and emotion. Development analyzes the changes through one's life including the physical, cognitive, emotional, social and moral development. Cognition focuses on learning, memory, information processing, and language development. Personality and Assessment explains the approaches used to explain one's personality and the assessment tools used. Abnormal Psychology explores psychological disorders and the various treatments used for them. Socio-Cultural Dimensions of Behavior covers topics such as conformity, obedience, perceptions, attitudes and influence of the group on the individual. Psychological Thinking explores how to think like a psychologist and expand critical thinking skills needed in the day-to-day life of a psychologist.

- Required Prerequisites: none
- Credits: 1 to 2 semester course, 1 credit per semester
- Counts as an elective for all diplomas
- Fulfills course requirement for General Diploma

SOCIOLOGY

1534 (SOCIOLOGY)

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.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester
- Counts as an Elective for all diplomas

UNITED STATES GOVERNMENT

1540 (US GOVT)

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

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester

- Fulfills Government requirement for all diplomas
- Students are required to take the naturalization test for citizenship per SEA 132 (New 2019- 2020).
- SEA 398 (Spring 2020) states that schools will be required to issue the naturalization test, report results, and post test data results starting in November 2022.

UNITED STATES HISTORY

1542 (US HIST)

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

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

GEOGRAPHY AND HISTORY OF THE WORLD

1570 (GEO-HST WLD)

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
- Credits: 2 semester course, 1 credit per semester
- 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

WORLD HISTORY AND CIVILIZATION

1548 (WLD HST/CVL)

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

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

AP PSYCHOLOGY

1558 (PSYCH AP)

AP Psychology 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 AP Psychology course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, analyze bias, evaluate claims and evidence, and effectively communicate ideas. Topics include: History and Approaches; Research Methods; Biological Bases of Behavior; Sensation and Perception; States of Consciousness; Learning; Cognition; Motivation and Emotion; Developmental Psychology; Personality; Testing and Individual Differences; Abnormal Behavior; Treatment of Abnormal Behavior; and Social Psychology.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none. Students should be able to read a college level textbook and write grammatically correct, complete sentences.
- Credits: 1 to 2 semester course, 1 credit per semester
- Counts as an elective for all diplomas

AP UNITED STATES HISTORY

(offered on APEX)

1562 (US HIST AP)

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

relate to life in Indiana and the United States. Students are expected to trace and analyze chronological periods and examine the significant themes and concepts in U.S. History. Students develop historical thinking and research skills and use primary and secondary sources to explore topical issues and to understand the cause for changes in the nation over time.

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

World Language

SPANISH I

2120 (SPAN I)

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

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: “B” or higher in English
- Credits: 2 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a World Language requirement for the Core 40 with Academic Honors Diploma

SPANISH II

2122 (SPAN II)

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

- Recommended Grade Level: 9, 10, 11, 12
- Required Prerequisites: Spanish I

- Credits: 2 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a World Language requirement for the Core 40 with Academic Honors Diploma

SPANISH III

2124 (SPAN III)

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

- Recommended Grade Level: 9, 10, 11, 12
- Required Prerequisites: Spanish I and II
- Credits: 2 semester course, 1 credit per semester
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a World Language requirement for the Core 40 with Academic Honors Diploma

CAREER and TECHNICAL EDUCATION COURSES (CTE)

The Governor’s Workforce Cabinet’s Office of Career and Technical Education has launched new Career and Technical Education (CTE) courses for the 2022-2023 school year. This initiative, called Next Level Programs of Study (NLPS), aims to improve the consistency, quality, and intentionality of CTE programs throughout Indiana. Questions regarding Indiana’s CTE system can be directed to CTE@gov.IN.gov or may be answered in the NLPS FAQ Document. Please visit the CTE Programs of Study webpage to view additional NLPS resources.

Career and Technical Education (CTE) course titles and descriptions are included in this document under the following subject areas/career clusters:

Advanced Manufacturing
Agriculture
Architecture and Construction
Arts, AV Tech, and Communications
Business, Marketing, and Finance
Career and Technical Education (CTE)
Work-Based Learning
Education and Training
Family and Consumer Sciences (FACS)
Health Science
Hospitality and Tourism
Human Services
Information Technology
Law and Public Safety
STEM
Transportation

Career Cluster: Advanced Manufacturing**PRINCIPLES OF WELDING TECHNOLOGY****7110 (PRIN WEL TCH)**

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

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

SHIELDED METAL ARC WELDING

7111 (SHLD MAW)

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

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

GAS WELDING PROCESSES

7101 (GAS WEL PRC)

Gas Welding Processes, a course designed to cover the operation of Gas Metal Arc Welding (MIG) equipment. This will include all settings, adjustments and maintenance needed to weld with a wire feed system. Instruction on both short-arc and spray-arc transfer methods will be covered. Tee, lap, and open groove joints will be done in all positions with solid, fluxcore, and aluminum wire. Test plates will be made for progress evaluation. Schools will have the option to introduce students to both MIG and TIG welding rather than focusing solely on MIG welding.

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

WELDING TECHNOLOGY CAPSTONE

7226 (WELD TECH CAP)

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

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Welding Technology; Shielded Metal Arc Welding; Gas Welding Processes
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

PRINCIPLES OF PRECISION MACHINING

7109 (PRIN PREC MACH)

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

- Recommended Grade(s): 9, 10, 11

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

PRECISION MACHINING FUNDAMENTALS

7105 (MACH FUN)

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

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Precision Machining
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Qualifies as a quantitative reasoning course
- It is recommended that Precision Machining program of study be taught in a 2-3 period block of time. VU dual credit requires that Precision Machining Fundamentals and Advanced Precision Machining be completed concurrently

ADVANCED PRECISION MACHINING

7107 (PREC MACH)

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

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Precision Machining; Precision Machining Fundamentals
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas •Qualifies as a quantitative reasoning course •It is recommended that Precision Machining program of study be taught in a 2-3 period block of time.
- VU dual credit requires that Precision Machining Fundamentals and Advanced Precision Machining be completed concurrently

PRECISION MACHINING CAPSTONE

7219 (PREC MACH CAP)

Precision Machining Capstone is an in-depth study of skills learned in Precision Machining I, with a stronger focus on CNC setup/operation/programming. Students will be introduced to two axis CNC lathe programming and three axis CNC milling machine programming. Develops the theory of programming in the classroom with applications of the program accomplished on industry-type machines. Studies terminology of coordinates, cutter paths, angle cutting, and linear and circular interpolation. Classroom activities will concentrate on precision set-up and inspection work, as well as machine shop calculations. Students will develop skills in

advanced machining and measuring parts involving tighter tolerances and more complex geometry. A continued focus on safety will also be presented.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Precision Machining; Precision Machining Fundamentals; Advanced Precision Machining
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as a quantitative reasoning course

Career Cluster: Agriculture

ANIMAL SCIENCE/AGRI 103 IVY TECH

5008 (ANML SCI)

Animal Science is a two semester course that provides students with an overview of the animal agriculture industry. Students participate in a large variety of activities and laboratory work including real and simulated animal science experiences and projects. All areas that the students study may be applied to both large and small animals. Topics to be covered in the course include: history and trends in animal agriculture, laws and practices relating to animal agriculture, comparative anatomy and physiology of animals, biosecurity threats and interventions relating to animal and human safety, nutrition, reproduction, careers, leadership, and supervised agricultural experiences relating to animal agriculture.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Agriculture*
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Fulfills a science course requirement for all diplomas
- Fulfills a physical science requirement for General Diploma
- *Principles course is not required until 2024-25 school year because this course is included in Perkins V pathways.

INTRODUCTION TO AGRICULTURE, FOOD AND NATURAL RESOURCES

5056 (INT AGFNR)

Introduction to Agriculture, Food and Natural Resources is a two semester course that is highly recommended as a prerequisite to and as a foundation for all other agricultural classes. Through hands-on learning activities, students are encouraged to investigate areas of agriculture. Students are introduced to the following areas of agriculture: animal science, plant and soil science, food science, horticultural science, agricultural business management, natural resources, agriculture power, structure, and technology, careers in agriculture, leadership, and supervised agricultural experience. An activity and project based approach is used along with team building to enhance the effectiveness of the student learning activities.

- Recommended Grade Level: 8
- Recommended Prerequisites: none
- Credits: 1 or 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

ADVANCED LIFE SCIENCE, ANIMALS (L)/AGRI 107 IVY TECH

5070 (ALS ANIML)

Advanced Life Science: Animals is a two semester course that provides students with opportunities to

participate in a variety of activities including laboratory work. Students will explore concepts related to history and trends in animal agriculture as related to animal welfare, husbandry, diseases and parasites, laws and practices relating to handling, housing, environmental impact, global sustainable practices of animal agriculture, genetics, breeding practices, biotechnology uses, and comparative knowledge of anatomy and physiology of animals used in animal agriculture.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Agriculture*; or Principles of Veterinary Science*
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources; Animal Science; Biology; Chemistry; Integrated Chemistry Physics
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as an elective or directed elective for all diplomas.
- Fulfills a science requirement for all diplomas.
- Qualifies as a quantitative reasoning course
- *Principles course is not required until 2024-25 school year because this course is included in Perkins V pathways.

HORTICULTURAL SCIENCE/AGRI 116 IVY TECH

(offered on a rotation)

5132 (HORT SCI)

Horticulture Science is a two semester course that provides students with a background in the field of horticulture. Coursework includes hands-on activities that encourage students to investigate areas of horticulture as it relates to the biology and technology involved in the production, processing, and marketing of horticultural plants and products. Students are introduced to the following areas of horticulture science: reproduction and propagation of plants, plant growth, growth-media, management practices for field and greenhouse production, marketing concepts, production of plants of local interest, greenhouse management, floral design, and pest management. Students participate in a variety of activities including extensive laboratory work usually in a school greenhouse.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Agriculture*
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas.
- Fulfills a Life Science or Physical Science requirement for the General Diploma
- *Principles course is not required until 2024-25 school year because this course is included in Perkins V pathways.

LANDSCAPE MANAGEMENT I/IVY TECH LAND 103

(class of 2024)

5136 (LAND MGMT I)

Landscape Management is a two semester course that provides the student with an overview of the many career opportunities in the diverse field of landscape management. Students are introduced to the procedures used in the planning and design of a landscape using current technology practices, the principles and procedures involved with landscape construction, the determination or maintenance schedules, communications and management skills necessary in landscaping operations and the care and use of equipment utilized by landscapers. Upon completion of the program, students have the opportunity to become Indiana Landscape Industry Certified through a state approved program.

- Recommended Grade: 11, 12

- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources
- Credits: 2 semester course, 2 semesters required, 1-3 credit(s) per semester, 6 credits maximum
- Counts as an Elective or Directed Elective for all diplomas.
- Qualifies as a quantitative reasoning course

LANDSCAPE AND TURF MANAGEMENT

(class of 2025)

7115 (LAND TUR MAN)

Landscape and Turf Management is a two-semester course that provides the student with an overview of the many career opportunities in the diverse field of landscape and turf management. Students are introduced to the procedures used in the planning and design of a landscape using current technology practices, the principles and procedures involved with landscape construction, the determination of maintenance schedules, communications, and management skills necessary in landscaping operations, and the care and use of equipment utilized by landscapers. Upon completion of the program, students have the opportunity to become Indiana Landscape Industry Certified through a state approved program.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Agriculture
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective credits for all diplomas

SUPERVISED AGRICULTURAL EXPERIENCE (SAE)

5228 (SAE)

Supervised Agricultural Experience is designed to provide students with opportunities to gain experience in the agriculture field(s) in which they are interested. Students will experience and apply what is learned in the classroom, laboratory and training site to real-life situations with a standards-based plan for learning. Students work closely with their agriculture teacher(s), parents and/or employers to get the most out of their SAE program. This course can be offered each year as well as during the summer session. Curriculum content and competencies need to be varied so that school year and summer session experiences are not duplicative.

- Recommended Grade: 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources
- Credits: 1 semester course, 1 credit per semester, 8 credits maximum
- Curriculum content and standards-based plan for learning should not be duplicated when this course is taken for multiple semesters.

PRINCIPLES OF AGRICULTURE

7117 (PRIN AG)

Principles of Agriculture is a two semester course that will cover the diversity of the agricultural industry and agribusiness concepts. Students will develop an understanding of the role of agriculture in the United States and globally. 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, 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.

- Recommended Grade(s): 9, 10, 11

- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective credits for all diplomas

PRINCIPLES OF VETERINARY SCIENCE

7280 (PRIN VET SCI)

Principles of Veterinary Science is a two-semester course that provides students with an overview of the small and large animal veterinary industry which includes companion, food, and exotic animals. Principles of Veterinary Science will cover skills common to specific veterinary career topics such as animal care, veterinary assistant, veterinary technician, and veterinarian. Students will learn foundational veterinary knowledge for large and small animals which includes practical lab skills and common office practices.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

VETERINARY SCIENCE

7281 (VET SCI)

Veterinary Science is a two-semester course that provides students with opportunities to participate in a variety of activities including laboratory work. Students will explore concepts related to medical terminology, laboratory procedures, clinical examination procedures, principles of animal diseases, as well as work in veterinary clinic management and veterinary law and ethics.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Veterinary Science
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

VETERINARY SCIENCE CAPSTONE

7282 (VET SCI CAP)

Veterinary Science Capstone is a two-semester course that builds upon the knowledge and skills developed in the animal and veterinary courses by developing advanced skills that students can apply to the field. As a capstone course, students should have the opportunity to apply their knowledge and use skills through an intensive work-based learning experience. Students will explore concepts related to pharmacy and pharmacology, medical math, animal nursing, radiology and ultrasound imaging, surgical preparation and assisting.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Veterinary Science; Advanced Life Science: Animals; Veterinary Science
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

Career Cluster: Architecture and Construction**PRINCIPLES OF CONSTRUCTION TRADES****7130 (PRIN CON TR)**

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

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

CONSTRUCTION TRADES: GENERAL CARPENTRY**7123 (CON TRD GC)**

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

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Construction Trades; or Principles of Architecture, Engineering and Construction
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

CONSTRUCTION TRADES: FRAMING AND FINISHING**7122 (CON TRD FR FIN)**

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

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Construction Trades; Construction Trades: General Carpentry
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

CONSTRUCTION TRADES CAPSTONE**7242 (CSTR TR CAP)**

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

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Construction Trades; Construction Trades: General Carpentry; and Construction Trades: Framing and Finishing
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

ELECTRICAL FUNDAMENTALS

7124 (ELEC FUN)

Electrical Fundamentals, this course covers NCCER Electrical Level 1. Its modules cover topics such as orientation to the electrical trade, electrical safety, introduction to electrical circuits, electrical theory, introduction to the National Electrical Code, device boxes, hand bending, raceways and fittings, conductors and cables, basic electrical construction drawings, residential electrical services, and electrical test equipment. The NCCER Electrical Level 1 certificate and wallet card will also be awarded upon successful completion of this course.

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

ADVANCED ELECTRICAL

7119 (ADV ELEC)

Advanced Electrical covers topics such as alternating current, motors: theory and application, electric lighting, conduit bending, and pull and junction boxes. The second part of the course will cover topics such as conductor installations, cable tray, conductor terminations and splices, grounding and bonding, circuit breakers and fuses, control systems and fundamental concepts. Students will be ready to complete the NCCER Electrical Level 2 certificate upon successful completion of the course.

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

CONSTRUCTION TRADES ELECTRICAL CAPSTONE

7263 (CT ELEC CAP)

Construction Trades Electrical Capstone builds upon the skills learned in Electrical Fundamentals and Advanced Electrical. Topics include load calculations – branch and feeder circuits, conductor selection and calculations, practical applications of lighting. This course will also cover commercial electrical services including distribution equipment, transformers, and voice, data and video. Completion of this course will prepare students for the NCCER Electrical Level 3 certificate. Students may also complete an Ivy Tech CT by completing coursework in general carpentry.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Construction Trades; Electrical Fundamentals; Advanced Electrical
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

BUILDING AND FACILITIES MAINTENANCE FUNDAMENTALS**7285 (BLDG FAC MAINT FUND)**

Building and Facilities Maintenance Fundamentals prepares students to complete basic maintenance tasks like minor construction repairs and be able to repair and/or replace various building materials including flooring, wall covering, hardware, lighting and plumbing fixtures.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Construction Trades
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

ADVANCED BUILDING AND FACILITIES MAINTENANCE**7286 (ADV BLDG FAC MAINT)**

Advanced Building and Facilities Maintenance prepares students to complete more advanced repairs involving a buildings mechanical system including electrical, HVAC, and plumbing.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Construction Trades; Building and Facilities Maintenance Fundamentals
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

BUILDING AND FACILITIES MAINTENANCE CAPSTONE**7287 (BLDG FAC MAINT CAP)**

Building and Facilities Maintenance Capstone will continue to develop students' maintenance skills ideally through a work-based learning experience. Students will also explore additional topics like processing work orders, fair housing regulation compliance, environmental and regulation compliance, reporting and documentation of maintenance activities, and implementation of a preventive maintenance schedule.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Construction Trades; Building and Facilities Maintenance Fundamentals; and Advanced Building and Facilities Maintenance
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

HEAVY EQUIPMENT FUNDAMENTALS**7290 (HVY EQUIP FUND)**

Heavy Equipment Fundamentals orients students to the Heavy Equipment industry and the basics operational techniques required to be a Heavy Equipment Operator. Topics include safety, identification of heavy equipment, utility tractors, earthmoving and grades. This course prepares students for the NCCER Heavy Equipment Level 1 certification.

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

ADVANCED HEAVY EQUIPMENT OPERATIONS

7291 (ADV HVY EQUIP OPER)

Advanced Heavy Equipment Operations builds upon the earthmoving knowledge learned in Heavy Equipment Fundamentals. Students will gain the necessary skills and knowledge regarding soils, excavation math, and interpreting Civil Drawings to be able to prepare a site. Additionally students will learn to operate scrapers used in site preparation. This course will prepare students for the first half of the NCCER Heavy Equipment Operations Level 2.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Construction Trades; Heavy Equipment Fundamentals
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

Career Cluster: Arts, AV Tech, and Communications

PRINCIPLES OF DIGITAL DESIGN

7140 (PRIN DIG DES)

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

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

DIGITAL DESIGN GRAPHICS

7141 (DIG DES GRAPH)

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

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

GRAPHIC DESIGN AND LAYOUT

5550 (GRAPH DES LT)

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

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Digital Design; Digital Design Graphics
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum •Counts as a directed elective or elective for all diplomas
- Principles course is not required until 24-25 school year because this course is included in Perkins V pathways.

DIGITAL DESIGN CAPSTONE

7246 (DIG DES CAP)

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

- Recommended Grade(s): 11, 12
- Required Prerequisites: Digital Design Concentrator Sequence
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semester required, 1-3 credits per semester, 6 credits max
- Counts as a Directed Elective or Elective for all diplomas

RADIO AND TELEVISION I

5986 (RAD TV I)

Radio and Television I focuses on communication, media and production. Emphasis is placed on career opportunities, production, programming, promotion, sales, performance, and equipment operation. Students will also study the history of communication systems as well as communication ethics and law. Students will develop oral and written communication skills, acquire software and equipment operating abilities, and integrate teamwork skills. Instructional strategies may include a hands-on school-based enterprise, real and/or simulated occupational experiences, job shadowing, field trips, and internships.

- Recommended Grade: 11,12
- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Communications
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

RADIO AND TELEVISION II

5992 (RAD TV II)

Radio and Television II prepares students for admission to television production programs at institutions of higher learning. Students train on professional equipment creating a variety of video projects. During this second-year program students integrate and build on first-year curriculum while mastering advanced concepts in production, lighting and audio.

- Recommended Grade: 12
- Required Prerequisites: Radio and Television I
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

Career Cluster: Business, Marketing, and Finance**ACCOUNTING FUNDAMENTALS***(on APEX or Ivy Tech online)***4524 (ACCT FUND)**

Accounting Fundamentals introduces the language of business using Generally Accepted Accounting Principles (GAAP) and procedures for proprietorships and partnerships using double-entry accounting. Emphasis is placed on accounting principles as they relate to both manual and automated financial systems. This course involves understanding, analyzing, and recording business transactions and preparing, analyzing, and interpreting financial reports as a basis for decision-making.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Business Management
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective all diplomas
- Principles course is not required until 24-25 school year because this course is included in Perkins V pathways.
- Formerly Introduction to Accounting

PRINCIPLES OF BUSINESS MANAGEMENT**4562 (BUS MGMT)****4562IT (BUS MGMT/BUSN 101 IVY TECH)**

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.

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

MANAGEMENT FUNDAMENTALS/MGMT 101 IVY TECH**7143 (MGMT FUND)**

Management Fundamentals describes the functions of managers, including the management of activities and personnel. Describes the judicial system and the nature and sources of law affecting business. Studies contracts, sales contracts with emphasis on Uniform Commercial Code Applications, remedies for breach of contract and tort liabilities. Examines legal aspects of property ownership, structures of business ownership, and agency relationships.

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

MARKETING FUNDAMENTALS/IVY TECH MKTG 101**5914 (PRN MRKT)**

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.

- Recommended Grade(s): 11,12
- Required Prerequisites: Principles of Business Management*
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- *Formerly Principles of Marketing; Principles course is not required until 2024-25 school year because this course is included in Perkins V pathways.

ENTREPRENEURSHIP AND NEW VENTURES CAPSTONE**5966 (ENT VENT CAP)**

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

- Recommended Grade: 12
- Required Prerequisites: a minimum of 4 credits of introductory or advanced career and technical education courses from the Business and Marketing career cluster: Introduction to Business, Introduction to Entrepreneurship, Principles of Business Management, Marketing Fundamentals
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a directed elective or elective for all diplomas

PRINCIPLES OF BUSINESS OPERATIONS AND TECHNOLOGY**7153 (PRIN BUS OP TECH)**

The Principles of Business Operations and Technology course will prepare students to plan, organize, direct, and control the functions and processes of a firm or organization and be successful in a work environment. Students are provided opportunities to develop attitudes and apply skills and knowledge in the areas of business, management, Microsoft office, and finance. Individual experiences will be based upon the student’s career and educational goals.

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

Career Cluster: CTE-Career and Technical Education**PERSONAL FINANCIAL RESPONSIBILITY****4540 (PRSFINRSP)**

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. A project based approach and applications through authentic settings such as work based observations and service learning experiences are appropriate. Direct, concrete applications of mathematics proficiencies in projects are encouraged.

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: None
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as a quantitative reasoning course

PREPARING FOR COLLEGE AND CAREERS**5394 (PREP CC)**

Preparing for College and Careers addresses the knowledge, skills, and behaviors all students need to be prepared for success in college, career, and life. The focus of the course is the impact of today's choices on tomorrow's possibilities. Topics to be addressed include twenty-first century life and career skills; higher order thinking, communication, leadership, and management processes; exploration of personal aptitudes, interests, values, and goals; examining multiple life roles and responsibilities as individuals and family members; planning and building employability skills; transferring school skills to life and work; and managing personal resources. This course includes reviewing the 16 national career clusters and Indiana's College and Career Pathways, in-depth investigation of one or more pathways, reviewing graduation plans, developing career plans, and developing personal and career portfolios. A project based approach, including computer and technology applications, cooperative ventures between school and community, simulations, and real life experiences, is recommended.

- Recommended Grade: 9
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 or 2 semester course, 1 credit per semester, 2 credit maximum; Only 1 credit may count toward CTE Concentrator Status for Perkins IV Pathways
- Counts as a Directed Elective or Elective for all diplomas

Career Cluster: Work Based Learning**CAREER EXPLORATION INTERNSHIP****0530 (CARR EXP)**

The Career Exploration Internship course is a paid or unpaid work experience in the public or private sector that provides for workplace learning in an area of student career interests. Unlike the work-based Learning capstone course in which students gain expertise in a specific occupation, the career exploration internship is intended to expose students to broad aspects of a particular industry or career cluster area by rotating through a variety of work sites or departments. In addition to their workplace learning activities, students participate in

1) regularly scheduled meetings with their classroom teacher, or 2) a regularly scheduled seminar with the teacher for the purpose of helping students make the connection between academic learning and their work-related experiences. Specific instructional standards tied to the career cluster or pathway and learning objectives for the internship must be written to clarify the expectations of all parties – the student, parent, employer, and instructor

- Recommended Grade: 9, 10, 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Preparing for College and Careers; Career Information and Exploration
- Credits: 1 semester course, 1-3 credits per semester, 6 credits maximum
- 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 1 hour a week or the equivalent over a semester or year) must be spent in related classroom instruction. Schools on block schedules may proportionately adjust the total number of hours per week to meet the local standard, provided that students spend at least one hour a week in classroom activities.
- Counts as a Directed Elective or Elective for all diplomas
- Note: This course is exploratory in nature and, as such, does not qualify for reimbursement under the career and technical education funding formula.

COOPERATIVE EDUCATION

6162 (COOP EDU)

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.

- Recommended Grade: 12
- Required Prerequisites: none
- Recommended Prerequisites: Preparing for College and Careers, two credits in a career and technical education course
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

Career Cluster: Education and Training

EDUCATION PROFESSIONS I/IVY TECH EDUC 101

5408 (ED PROF I)

5408IT (ED PROF I/EDUC 101)

Education Professions I provides the foundation for employment in education and related careers and prepares students for study in higher education. An active 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. Exploratory field experiences in classroom settings 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 Professionals I teacher. Articulation with post-secondary programs is encouraged.

EDUC 101 Examining Self as Teacher (3 cr.): Designed to help a student make a career decision, better conceptualize the kind of teacher the student wishes to become, and reconcile any preliminary concerns that may be hampering a personal examination of self as teacher. Students will design a major portion of their work.

- Recommended Grade Level: 11,12
- Required Prerequisites: none
- Recommended Prerequisites: Nutrition and Wellness; Child Development, Advance Child Development; and Interpersonal Relationships
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a directed elective or elective for all diplomas

Career Cluster: Health Science

HUMAN BODY SYSTEMS

5216 (HUMAN SYST)

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

- Recommended Grade: 10
- Required Prerequisites: Principles of the Biomedical Sciences
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Fulfills a science requirement for all diplomas

PRINCIPLES OF BIOMEDICAL SCIENCES

5218 (PRIN BIOMED)

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

- Recommended Grade: 9
- Required Prerequisites: Biology I or concurrent enrollment in Biology I is required
- Recommended Prerequisites: none
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum

- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a science requirement for all diplomas

MEDICAL INTERVENTIONS

(at South Ripley)

5217 (MED INTERV)

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. Lessons will cover the history of organ transplants and gene therapy with additional readings from current scientific literature addressing cutting edge developments. NOTE: This course aligns with the PLTW Medical Interventions curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

- Recommended Grade(s): 11
- Required Prerequisites: Principles of Biomedical Sciences
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Fulfills a science requirement for all diploma types

ANATOMY AND PHYSIOLOGY

5276 (A & P)

Anatomy & Physiology is a course in which students investigate concepts related to Health Science, with emphasis on interdependence of systems and contributions of each system to the maintenance of a healthy body. It introduces students to the cell, which is the basic structural and functional unit of all organisms, and covers tissues, integumentary, 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.

- Recommended Grade: 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Biology
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Fulfills a science course requirement for all diplomas

PRINCIPLES OF HEALTHCARE

7168 (PRIN HLCR)

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

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

MEDICAL TERMINOLOGY**5274 (MED TERMS)**

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

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

HEALTHCARE SPECIALIST: CNA**7166 (HC SPEC CNA)**

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

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

HEALTHCARE SPECIALIST CAPSTONE**7255 (HC SPEC CAP)**

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

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Healthcare; Medical Terminology; Healthcare Specialist: CNA, EMT or Certified Clinical Medical Assistant (CCMA)
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semester required, 1-3 credits per semester, 6 credits max
- Counts as a Directed Elective or Elective for all diplomas

HEALTH SCIENCE EDUCATION II: ATHLETIC TRAINING

5290 (HSE II ATH)

Health Science Education II: Athletic Training is an extended laboratory experience at a qualified clinical site designed for students to assume the role of an athletic trainer assistant and practice using the technical skills and information previously learned in the classroom. This course prepares students with the knowledge, skills and attitude essential for providing basic care under the direction of licensed Athletic Trainers. Throughout this course, students will focus on learning about the healthcare system and employment opportunities at a variety of entry levels, an overview of healthcare delivery systems, and legal and ethical considerations of working in the healthcare field.

- Recommended Grade Level: 10,11, 12
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, maximum of 6 credits.
- Counts as a Directed Elective or Elective for all diplomas

PRINCIPLES OF DENTAL CAREERS

7315 (PRIN DENT CAR)

Principles of Dental Careers will provide the foundational knowledge and skills necessary to pursue a career in the Dental Field. A focus will be placed on the role of the modern dental assistant and will cover key pre-clinical procedures and beginning dental terminology.

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

DENTAL CAREERS FUNDAMENTALS

7316 (DENT CAR FUND)

Dental Careers Fundamentals will build upon the knowledge and skills in the principles course. Students will understand and practice beginning chairside functions of the Dental Assistant along with a focus on the Anatomy and Physiology of the head, neck and oral cavity. Students will also study tooth anatomy, physiology and morphology. This part of the program will prepare students for the Anatomy, Morphology, and Physiology exam of the NELDA certification.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Dental Careers
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

ADVANCED DENTAL CAREERS

7317 (ADV DENT CAR)

Advanced Dental Careers Fundamentals will build upon the knowledge and skills developed in the first two courses. Students will study more advanced chairside assisting functions along with advanced infection control techniques. Additionally students will explore preventive dentistry practices and dental emergencies. This course will prepare students for the ICE exam of the NELDA certification.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Dental Careers; Dental Careers Fundamentals
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum

- Counts as a Directed Elective or Elective for all diplomas

DENTAL CAREERS CAPSTONE

(starting 23-24 school year)

7318 (DENT CAR CAP)

Dental Careers capstone will provide the opportunity for increased skill development in clinical support through work-based learning experiences. Students will also prepare for the Radiation, Health and Safety which is third and final part of the NELDA certification. The capstone course may also provide the opportunity to review and prepare for the entire NELDA certification.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Dental Careers; Dental Careers Fundamentals; Advanced Dental Careers
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

Career Cluster: Hospitality and Tourism

PRINCIPLES OF CULINARY AND HOSPITALITY

7173 (PRIN HOSP)

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.

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

NUTRITION

7171 (FD THRY NUT)

Nutrition students will learn the characteristics, functions and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will be made aware of nutrient needs throughout the life cycle and 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.

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

CULINARY ARTS

7169 (CUL ARTS)

Culinary Arts teaches students how to prepare the four major stocks, the five mother sauces (in addition to smaller sauces) and various soups. Additional emphasis is placed on the further development of the classical

cooking methods. This course will also present the fundamentals of baking science including terminology, ingredients, weights and measures, and proper use and care of equipment. Students will produce yeast goods, pies, cakes, cookies, and quick breads.

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

CULINARY ARTS CAPSTONE

7233 (CUL ARTS CAP)

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

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Culinary and Hospitality; Nutrition; Culinary Arts
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semester required, 1-3 credits per semester, 6 credits max
- Counts as a Directed Elective or Elective for all diplomas

Career Cluster: Human Services

PRINCIPLES OF BARBERING AND COSMETOLOGY

7330 (PRIN COSMO)

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

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- This course may require extended hours of participation in order to meet the 1500 hours required for the Cosmetology and Barbering exams.

BARBERING AND COSMETOLOGY FUNDAMENTALS

7331 (STY COSMO)

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

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Barbering and Cosmetology

- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- This course may require extended hours of participation in order to meet the 1500 hours required for the Cosmetology and Barbering exams.

ADVANCED COSMETOLOGY

7332 (ADV COSMO)

Advanced Cosmetology will emphasize the development of advanced skills in styling, hair coloring, permanent waving, facials and manicuring. Students will also study anatomy and physiology as it applies to cosmetology. Successful completion of the course requires at least 375 Cosmetology studio hours.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Barbering and Cosmetology; Barbering and Cosmetology Fundamentals
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- This course may require extended hours of participation in order to meet the 1500 hours required for the Cosmetology and Barbering exams.

BARBERING AND COSMETOLOGY CAPSTONE

(starting 23-24 school year)

7334 (COSMO CAP)

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

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Barbering and Cosmetology; Barbering and Cosmetology Fundamentals; Advanced Cosmetology or Advanced Barbering
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- This course may require extended hours of participation in order to meet the 1500 hours required for the Cosmetology and Barbering exams.

Career Cluster: Information Technology

INFORMATION TECHNOLOGY SUPPORT I

(at JCD)

5230 (IN TECH SUPP)

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

- Recommended Grade Level: 11, 12
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum

- Counts as a Directed Elective or Elective for all diplomas

PRINCIPLES OF COMPUTING

7183 (PRIN COMP INFO)

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

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: none
- Recommended Prerequisites: Introduction to Computer Science; Completed or Co-Enrolled in Algebra I
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

INFORMATION TECHNOLOGY FUNDAMENTALS

7180 (INFO TECH FUN)

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

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

NETWORKING FUNDAMENTALS

7182 (NTWK FUN)

Networking Fundamentals describes, explores and demonstrates how a network operates in our everyday lives. The course covers the technical pieces and parts of a network and also societal implications such as security and data integrity. Using hands-on lab work, this course offers students the critical information needed for a role as an Information Technology professional who supports computer networks. Concepts covered include the TCP/IP model, OS administration, designing a network topology, configuring the TCP/IP protocols, managing network devices and clients, configuring routers and switches, wireless technology and troubleshooting. Provides students the ability to implement, administer, and troubleshoot information systems that incorporate the Microsoft Windows clients and servers in an enterprise environment. Students will be introduced to managing applications, files, folders, and devices in a windows active directory environment.

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

NETWORKING CAPSTONE**7251 (NETWK CAP)**

Networking Capstone includes hands-on lab work, and a wide array of assessment types and tools. The course covers the architecture, components, and operations of routers and switches in small networks and introduces wireless local area networks (WLAN) and security concepts. Students learn how to configure and troubleshoot routers and switches for advanced functionality using security best practices and resolve common issues with protocols in both IPv4 and IPv6 networks. The course also emphasizes network security concepts and introduces network virtualization and automation. Students learn how to configure, troubleshoot, and secure enterprise network devices and understand how application programming interfaces (API) and configuration management tools enable network automation.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Computing; Information Technology Fundamentals; Networking Fundamentals
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

NETWORKING I*(at JCD)***5234 (NET I)**

Networking I introduces students to local and wide area networks, home networking, networking standards using the IEEE/OSI Model, network protocols, transmission media and network architecture/ topologies. Security and data integrity are introduced and emphasized throughout this course, which offers students the critical information needed to successfully move into a role as an IT professional supporting networked computers. Concepts covered will include TCP/IP client administration, planning a network topology, configuring the TCP/IP protocol, managing network clients, configuring routers and hubs, as well as creating a wireless LAN.

- Recommended Grade(s): 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: Information Technology Support I
- Credits: Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

Career Cluster: Law and Public Safety**PRINCIPLES OF FIRE AND RESCUE****7195 (PRIN PS HAZ AWR)**

Principles of Fire and Rescue introduces students to the various roles that firefighters and emergency services workers play to protect the public from the loss of life and property. They are frequently the first emergency personnel at the scene of a traffic accident or medical emergency and may be called upon to put out a fire, treat injuries or perform other vital functions. This course will introduce students to the history, terminology, and basic firefighting skills needed for a beginning firefighter. Additionally, students will develop a career plan for a career in public safety; including areas of Fire Science, Homeland Security, and Emergency Medical Services.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: none

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

FIRE FIGHTING FUNDAMENTALS

7189 (FIRE FGHT FUN)

Fire Fighting Fundamentals is for those students who are seeking certification as a firefighter. This course will prepare students for the Hazardous Materials Awareness and Operations certifications and will introduce students to NFPA 1001 which serves as the standard of measurement for all fire fighters in North America. Students will learn the knowledge and hands on practical skills for managing and controlling a hazardous materials incident required for the certifications. Furthermore, students will study how a fire behaves and will learn the basic firefighting skills needed to extinguish a fire while protecting themselves and other firefighters.

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

ADVANCED FIRE FIGHTING

7186 (ADV FIRE FGHT)

Advanced Fire Fighting expands upon the principles and techniques of firefighting learned in Fire Fighting Fundamentals. Students will study fire protection systems, firefighter safety and survival. Students will also learn what fire is, the chemical hazards of combustion, and related by-products of fire. Additionally, students will gain a better understanding of fire department organization, administration, operations, and basic strategies and tactics.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Fire and Rescue; Fire Fighting Fundamentals
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

PRINCIPLES OF CRIMINAL JUSTICE

7193 (PRIN CR JUST)

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

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

LAW ENFORCEMENT FUNDAMENTALS

7191 (LAW ENF CLT AWR)

Law Enforcement Fundamentals critically examines the history and nature of the major theoretical perspectives in criminology, and the theories found within those perspectives. Analyzes the research support for such theories and perspectives, and the connections between theory and criminal justice system practice

within all the major components of the criminal justice system. Demonstrates the application of specific theories to explain violent and non-violent criminal behavior on both the micro and macro levels of analysis. Additionally, this course will introduce fundamental law enforcement operations and organization. This includes the evolution of law enforcement at federal, state, and local levels.

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

CORRECTIONS AND CULTURAL AWARENESS

7188 (CRT CORR)

Corrections and Cultural Awareness emphasizes the study of American criminal justice problems and systems in historical and cultural perspectives, as well as discussing social and public policy factors affecting crime. Multidisciplinary and multicultural perspectives are stressed. Additionally, this course takes a further examination of the American correctional system; the study of administration of local, state, and federal correctional agencies. The examination also includes the history and development of correctional policies and practices, criminal sentencing, jails, prisons, alternative sentencing, prisoner rights, rehabilitation, and community corrections including probation and parole. Current philosophies of corrections and the debates surrounding the roles and effectiveness of criminal sentences, institutional procedures, technological developments, and special populations are discussed.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Criminal Justice; Law Enforcement Fundamentals
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

Career Cluster: STEM

TOPICS IN COMPUTER SCIENCE

7351 (TOP COMP SCI)

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.

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

COMPUTER SCIENCE

7352 (COMP SCI)

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.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Computing
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Counts as a science credit
- Counts as a quantitative reasoning course
- The AP Computer Science A curriculum may be used to complete the competencies required for this course.

INTRODUCTION TO ENGINEERING DESIGN/IVY TECH DESN 101 and 113 (9-12)

4802 (INT ENG DES)

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

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- NOTE: Schools that have agreed to be part of the Project Lead the Way network must follow all training and data collection requirements.

INTRODUCTION TO DESIGN PROCESSES

4794 (INT DES PRO)

Introduction to Design Processes is a course that specializes in modern design and engineering processes with a focus on creative problem solving in developing, testing, communicating, and presenting post-evaluation of products. Students use the design process to analyze research, develop ideas, and produce product solutions. This process gives a framework through which they design, manufacture, test, and present their ideas. Students will demonstrate and utilize design principles and elements for visual presentation. Designing aspects will also cover aesthetics, ergonomics, the environment, safety, and production. The design process is a core learning tool for many courses enabling the student to solve problems in a systematic, logical and creative manner. Students develop a good understanding of the way the process helps them think creatively and develop aesthetic ideas. The design process encourages the students to engage in higher level thinking to create solutions for many types of problems.

- Recommended Grade(s): 9, 10
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 1 or 2 semester course, 1 credit per semester, 2 credits maximum

- Counts as a directed elective or elective for all diplomas

INTRODUCTION TO COMPUTER SCIENCE

4803 (INTO CS)

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

- Recommended Grade Level: 9, 10
- Credits: 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

COMPUTER SCIENCE II

5236 (CS II PROG)

Computer Science II explores and builds skills in programming and a basic understanding of the fundamentals of procedural program development using structured, modular concepts. Coursework emphasizes logical program design involving user-defined functions and standard structure elements. Discussions will include the role of data types, variables, structures, addressable memory locations, arrays and pointers, and data file access methods. An emphasis on logical program design using a modular approach, which involves task-oriented program functions.

- Recommended Grade Level: 11, 12
- Required Prerequisites: Computer Science I
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a science course requirement for all diplomas
- Qualifies as a quantitative reasoning course

PRINCIPLES OF ENGINEERING/DESN 104 IVY TECH

5644 (PRNC ENG)

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

- Recommended Grade(s): 10, 11
- Required Prerequisites: Introduction to Engineering Design
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Fulfills a science course requirement for all diplomas
- Qualifies as a quantitative reasoning course

ENGINEERING DESIGN AND DEVELOPMENT

5698 (ENG DES DEV)

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

- Recommended Grade(s): 12
- Required Prerequisites: Introduction to Engineering Design; Principles of Engineering; and one pre-engineering specialty course
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a directed elective or elective for all diplomas
- Qualifies as a quantitative reasoning course

INDUSTRIAL AUTOMATION AND ROBOTICS I

5610 (AUTO ROB I)

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

- Recommended Grade(s): 11, 12
- Required Prerequisites: none
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Schools wishing to offer this course for multiple credits should utilize Next Level Programs of Study courses.

AEROSPACE ENGINEERING

5518 (AERO ENG)

Aerospace Engineering should provide students with the fundamental knowledge and experience to apply mathematical, scientific, and engineering principles to the design, development, and evolution of aircraft, space vehicles and their operating systems. Emphasis should include investigation and research on flight characteristics, analysis of aerodynamic design, and impact of this technology on the environment. Classroom instruction should provide creative thinking and problem-solving activities using software that allows students to design, test, and evaluate a variety of air and space vehicles, their systems, and launching, guidance and control procedures. NOTE: This course aligns with the PLTW Aerospace Engineering curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

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

COMPUTER INTEGRATED MANUFACTURING

5534 (COMP INT MFG)

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

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

MANUFACTURING PRINCIPLES AND DESIGN

7202 (PRIN DES TECH)

Manufacturing Principles and Design will challenge students to use 2D and 3D CAD skills to explore topics related to manufacturing principles and design. Students will gain an understanding of solid modeling and parametric solid modeling and use 3D printers to create industry part prints. Additionally, students will compare manufacturing practices like Lean Manufacturing, design and program CNC processes, and use metrology tools and practices to evaluate an object.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: Introduction to Engineering Design; Mechanical and Architectural Design Fundamentals
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Counts as a quantitative reasoning course

DIGITAL ELECTRONICS/IVY TECH EECT 112

5538 (DIG ELEC)

Digital Electronics is a course of study in applied digital logic that encompasses the design and application of electronic circuits and devices found in video games, watches, calculators, digital cameras, and thousands of other devices. Instruction includes the application of engineering and scientific principles as well as the use of Boolean algebra to solve design problems. Using computer software that reflects current industry standards,

activities should provide opportunities for students to design, construct, test, and analyze simple and complex digital circuitry software will be used to develop and evaluate the product design. This course engages students in critical thinking and problem-solving skills, time management and teamwork skills. NOTE: This course aligns with the PLTW Digital Electronics curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Introduction to Engineering Design (-or- Principles of Engineering Technology)
- Recommended Prerequisites: Electronic Fundamentals
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Qualifies as a quantitative reasoning course

CIVIL ENGINEERING AND ARCHITECTURE/IVY TECH DESN 105

5650 (CIVIL ENG)

Civil Engineering and Architecture introduces students to the fundamental design and development aspects of civil engineering and architectural planning activities. Application and design principles will be used in conjunction with mathematical and scientific knowledge. Computer software programs should allow students opportunities to design, simulate, and evaluate the construction of buildings and communities. During the planning and design phases, instructional emphasis should be placed on related transportation, water resources, and environmental issues. Activities should include the preparation of cost estimates as well as a review of regulatory procedures that would affect the project design. NOTE: This course aligns with the PLTW Civil Engineering and Architecture curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

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

Career Cluster: Transportation

PRINCIPLES OF AUTOMOTIVE SERVICES

7213 (PRIN AUTO SER)

Principles of Automotive Services, this course gives students an overview of the operating and general maintenance systems of the modern automobile. Students will be introduced to the safety and operation of equipment and tools used in the automotive industry. Students will study the maintenance and light repair of automotive systems. Also, 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.

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

BRAKE SYSTEMS

7205 (AUTO BRK ELE)

This course gives students an in-depth study of vehicle electrical systems. Students will study the fundamentals of electricity and automotive electronics in various automotive systems. Additionally, it teaches theory, service and repair of automotive braking systems. This course provides an overview of various mechanical brake systems used on today's automobiles. This course will emphasize professional diagnosis and repair methods for brake systems.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Automotive Services
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Schools partnering with Vincennes University must offer the program of study as part of a 2-3 period block.

STEERING AND SUSPENSIONS

7212 (ENG PERF)

This course takes an in-depth look at engine performance, including concepts in the diagnosis and repair of ignition, fuel, emission and related computer networks. This course presents engine theory and operation and studies the various engine designs utilized today. This course also takes an in-depth look at engine performance, including advanced concepts in the diagnosis and repair of ignition, fuel, emission and related computer networks. This course presents engine theory and operation and studies the various engine designs utilized today. Hybrid/Alternative fuel technology will also be introduced.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Automotive Services
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Schools partnering with Vincennes University must offer the program of study as part of a 2-3 period block.

AUTOMOTIVE SERVICE CAPSTONE

7375 (AUTO SRV CAP)

This course further explores important skills and competencies within the Automotive Service Technology Pathway. Topics such as Steering & Suspension, Engine Repair, Climate Control, and Driveline Service. Additionally, Co-Op and Internship opportunities will be available for students.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Automotive Services; Brake Systems; Steering and Suspensions
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semester required, 1-3 credits per semester, 6 credits max
- Counts as a Directed Elective or Elective for all diplomas

PRINCIPLES OF DIESEL TECHNOLOGY

7216 (PRIN DSL SERV)

Principles of Diesel Services, 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.

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

DIESEL STEERING AND BRAKES

7210 (DSL STR BRKS)

Diesel Steering and Brakes, 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 components. Spring brakes and anti-lock systems will be studied on tractors and trailers.

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

DIESEL TRANSMISSIONS

7211 (DSL TRN ENGI REP)

Diesel Transmission and Engine Repair, this course explores theory, diagnosis, and overhaul procedures related to manual transmissions and differentials. Course includes service of twin countershaft, under-drive, 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.

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

DIESEL SERVICES CAPSTONE

7221 (DESL SRV CAP)

Diesel Services Capstone, this course further explores important skills and competencies within the Diesel Technology Pathway. Topics such as Truck Climate Control Systems, Diesel Engine Performance, HT Electrical Systems, Hd Truck Auto. Transmission and Heavy Truck Electronics. Additionally, co-op and internship opportunities will be available for students.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Diesel Technology; Diesel Steering and Brakes; Diesel Transmission
- Recommended Prerequisites: none
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

- Counts as a quantitative reasoning course

SOUTHEASTERN CAREER CENTER

Students have the option to attend the Career Center, which offers many types of training programs. Students are expected to complete the entire year at the Career Center. Each course is offered for 2 semesters and students can earn 6 credits, 3 per semester.

Other

IVY TECH (Batesville campus)

A multitude of courses are open to juniors and seniors. Students taking these courses will receive 3 college credits and only 1 high school credit. Students are encouraged to enroll in 2 courses during a semester and are required to complete a contract.

APEX (online program)

Several online courses are available through APEX to allow students more options or for students who need to retake courses.

***NOT EVERY CLASS IN THIS CURRICULUM GUIDE IS OFFERED EVERY YEAR. THIS DECISION IS BASED ON NUMBERS AND BEST USE OF STAFF.**

Jac-Cen-Del High School

Alternative Physical Education I and II Credits

The Indiana State Board of Education has provided flexibility to adapt the high school physical education requirements for students who demonstrate proficiency through other means.

Jac-Cen-Del High School provides the opportunity for students to receive Physical Education credit through participation as outlined below. If a student and his/her guardian wish to exercise this option, the student will be required to adhere to the requirements outlined below.

Requirements:

- Students may earn one (1) credit through completion of two sport seasons in one IHSAA sport, including cheerleading, dance, and marching band.
- Students may earn up to two (2) credits through completion of four IHSAA sport seasons, including cheerleading, dance, and marching band and must include participation in at least 2 different sports.
- A complete season is defined as: ***first practice to final event***. The students must remain on the active roster the entire season or the duration of the activity.
- Students must present the PE waiver form to the coach to be completed and return to the guidance office to receive the PE credit.
- Completion of a PE waiver form is mandatory for each PE credit.
- A grade of A will be granted to all students who meet the requirements for alternative credit.

Alternative Physical Education Waiver Form

Student's Name (*please print*) _____ has participated in the following IHSAA sports, cheerleading, or dance (please indicate school years in the blank):

_____ Boys/Girls Cross Country _____ Co-Ed Soccer _____ Boys/Girls Basketball _____ Girls Softball _____ Cheerleading _____ Marching Band	_____ Boys/Girls Golf _____ Girls Volleyball _____ Boys Baseball _____ Girls/Boys Track _____ Dance
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Coach's Name (*please print*) _____, please initial or check that each standard has been mastered. Forms should be returned to the guidance office.

_____ Standard 1: Motor Skills and Movement Patterns
 Students demonstrate competency in motor skills and movement patterns needed to perform a variety of physical activities.

_____ Standard 2: Movement Concepts
 Students demonstrate an understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.

_____ Standard 3: Physical Activity
 Students participate regularly in physical activity.

_____ Standard 4: Health-Enhancing Physical Fitness
 Students achieve and maintain a health-enhancing level of physical fitness.

_____ Standard 5: Responsible Personal and Social Behavior
 Students exhibit responsible personal and social behavior that respects self and others in physical activity settings.

_____ Standard 6: Value of Physical Activity
 Students value physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.

Student's Signature

Date

Coach's Signature

Date

PE Teacher's Signature

Date