

Fountain Central High School Course Description Guide

2019-2020 School Year

Table of Contents

General Introduction and Resources	3
Advanced College Credit	5
Advanced Placement (AP)	8
Career and Technical Education (Introduction)	12
CTE: Agriculture.....	13
CTE: Business, Marketing, Information Technology, and Entrepreneurship	17
CTE: Engineering/Technology	23
CTE: Family and Consumer Sciences.....	28
CTE: Health Sciences	36
CTE: Trade and Industry	40
CTE: Work based Learning	49
English/Language Arts	51
Fine Arts	59
Health and Wellness	66
Mathematics	67
Multidisciplinary.....	72
Physical Education.....	74
Science	76
Social Studies	80
World Languages.....	86

GENERAL INTRODUCTION AND RESOURCES

The 2019-2020 edition of the Indiana Department of Education's Course Titles and Descriptions list are course titles and descriptions that have been approved for schools to use during the 2019-2020 school year.

Course descriptions provide brief statements of the content of high school courses. These descriptions are intended to assist schools in communicating, in a broad context, the content and Indiana Academic Standards of state approved course titles.

Code numbers and titles listed for each course description must be used when reporting courses on Indiana Department of Education documents and should be used on student transcripts as well.

Instructional decisions related to curriculum selection and development, implementation, and assessment are left to local school corporations. In fact, Indiana schools may explore, develop, and implement activities and programs that go beyond these descriptions as they strive to prepare their students for life in an ever-changing society. Indiana State Board of Education rules and the School Improvement Plan required by Public Law 221 provide avenues for gaining approval of well-planned, non-standard programs and courses. School corporations may apply for a non-standard course waiver if the course or program is not listed in this document. Look for the links under "Non-Standard Course Request" at <http://www.doe.in.gov/achievement/ccr/course-titles-and-descriptions>

Additionally, information about teacher licensing for each course can be found at <http://www.doe.in.gov/licensing/what-can-i-teach-my-indiana-license>

Please note these other important details:

- ***Per 511 IAC 6.1-5-4.5, the course titles listed in this document, along with approved non-standard course waivers, are the only course titles that may be offered for high school credit in order to meet the graduation requirements established by the Indiana State Board of Education under 511 IAC 6-7 and 511 IAC 6-7.1.***
- Course descriptions provide guidance for Indiana schools as they develop instructional strategies, create classroom resources, and revise the descriptions to meet local needs. In order to meet minimum graduation requirements, the expectations of Core 40, and the requirements of the Honors diplomas, course descriptions are consistent with the Indiana Academic Standards for each course.
 - The Certificate of Completion course of study must be followed (effective for the student cohort that started in the school year 2018/2019) if a student with an IEP has been removed from a diploma path. The Certificate of Completion provides increased access to the general education curriculum by providing flexibility in earning either credits or applied units in general education or special education classes. The Certificate of Completion can be earned through any combination of applied units and credits.
 - For additional information, see the Certificate of Completion Resources webpage (DOE) at <https://www.doe.in.gov/student-services/student-assistance/coc>

- The maximum number of **credits** that may be granted for each course is listed in the course description bullets. Generally, one credit is awarded per semester except as noted. Course description bullets identify those courses in which students may receive credit for successive semesters of instruction.
- Required and recommended **prerequisites** are listed for some courses. Local schools and districts may require additional prerequisites.
- A **laboratory course**, identified by (L) in these course descriptions, is one in which a “minimum of twenty-five percent (25%) of the total instructional time is devoted to laboratory activities. Laboratory activities are those activities in which the pupil personally uses appropriate procedures and equipment in accomplishing that learning task.”
- 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.
- The Indiana State Board of Education does not restrict **high school credit** to course work completed in grades 9 through 12. Schools may elect to award high school credit to students who complete high school courses before entering Grade 9 if the course is fully equivalent to its high school counterpart. Local policies and procedure should be developed to govern credit for high school courses taught prior to Grade 9.
- **Multiple credits** may not be awarded for the same course unless the course description permits multiple credits to be awarded.
- **AP** and **Advanced College Credit** (Dual Credit) courses appear only in their respective sections and are not repeated in content area sections.

ADVANCED COURSES FOR COLLEGE CREDIT

ADVANCED COURSES FOR COLLEGE CREDIT

Introduction

Advanced Course for College Credit covers (1) any college-level course offered for credit by an accredited post-secondary institution through an approved agreement with a secondary school, or (2) any other post-secondary course offered for dual credit under the provisions of 511 IAC 6-10. The intent of this course is to allow schools to award high school credit to students for taking college courses with content that goes beyond that currently approved for high school credit.

Dual credit is the term given to courses in which high school students have the opportunity to earn both high school and college credits. Dual credit courses are taught by high school faculty, adjunct college faculty, or college faculty either at the high school or the college/university. This may also include online courses or distance education taught by college faculty. Dual credit is offered by both state and independent (private, regionally accredited) colleges and universities.

Indiana law currently requires each Indiana high school to offer a minimum of two dual credit courses.

According to the Indiana Commission for Higher Education's Policy on Dual Credit Courses Taught in High Schools by High School Faculty, all post-secondary institutions shall generate transcripts for all students who complete advanced courses for dual credit. In order to apply these dual credits toward an Honors Diploma Award, both the secondary and the post-secondary institutions must transcript the credit.

2152

ADVANCED WORLD LANGUAGE, COLLEGE CREDIT
(WLD LANG CC)

Advanced World Language, College Credit is a course covering (1) any advanced course offered for credit by an accredited post-secondary institution through an adjunct agreement with a secondary school, or (2) any other post-secondary world language course offered for dual credit under the provisions of 511 IAC 6-10.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Levels I, II and III of the language
- Credits: 1 semester course, 1 credit per semester. May be offered for successive semesters
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a World Language requirement for the Core 40 with Academic Honors Diploma
- 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 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.

ADVANCED PLACEMENT

Advanced Placement Introduction

Advanced Placement (AP) courses are intended to be equivalent to a similar college level course. The College Board does not designate a time period during which the content of the high school course is to be covered. Most AP courses require two traditional semesters to adequately address the course content and prepare students for the associated exam. The bulleted items following each course description indicate a few AP classes that could conceivably be completed in either one semester or two. All schools wishing to label a course “AP” must submit the subject-specific AP Course Audit form and the course syllabus to the *College Board* for each teacher of that AP course. The AP course audit information and is available at <http://www.collegeboard.com/html/apcourseaudit/>. It is also strongly recommended that all AP teachers take advantage of professional development opportunities in their content area.

Student Selection Criteria for AP courses: The College Board suggests that all students who are willing to accept the challenge of a rigorous academic curriculum should be considered for admission to AP courses. The College Board encourages the elimination of barriers that restrict access to AP courses for students from ethnic, racial, and socioeconomic groups that have been traditionally underrepresented in the AP Program. Schools should make every effort to ensure that their AP classes reflect the diversity of their student population. The IDOE further supports a school developing criteria for admission to AP courses to include, but are not limited to, AP Potential, previous success in content area courses, teacher recommendations, and standardized test results.

A comprehensive description of all AP course can be found on the College Board AP Central Course Description web page at: <http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html>

AP BIOLOGY (L) (BIO AP)

3020

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 Level: 11, 12
- Recommended Prerequisite: 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

AP CALCULUS AB
(CALC AB AP)

2562

AP Calculus AB is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. AP Calculus AB is equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. This course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

- Recommended Grade Level: 11, 12
- Required Prerequisites: Pre-Calculus
- Credits: 2 semester course, 1 credit per semester
- Counts as a Mathematics Course for all diplomas
- Qualifies as a quantitative reasoning course

AP CALCULUS BC
(CALC BC AP)

2572

AP Calculus BC is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. AP Calculus BC is roughly equivalent to both first and second semester college calculus courses and extends the content learned in AP Calculus AB to different types of equations and introduces the topic of sequences and series. This course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions. The content of AP Calculus *BC* is designed to qualify the student for placement and credit in a course that is one course beyond that granted for AP Calculus *AB*.

- Recommended Grade Level: 11, 12
- Required Prerequisites: Pre-Calculus
- Credits: 2 semester course, 1 credit per semester
- Counts as a Mathematics Course for all diplomas
- Qualifies as a quantitative reasoning course

AP CHEMISTRY (L)

(CHEM AP)

3060

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: gases, liquids and solids, solutions; and (3) reactions: reaction types, stoichiometry, equilibrium, kinetics and thermodynamics.

- Recommended Grade Level: 12
- Recommended Prerequisite: 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

AP UNITED STATES GOVERNMENT AND POLITICS

(US GOVT AP)

1560

AP United States Government and Politics is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. AP U.S. Government and Politics provides a college-level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. Students study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behavior. They also engage in disciplinary practices that require them to read and interpret data, make comparisons and applications, and develop evidence-based arguments. In addition, they complete a political science research or applied civics project.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Students should be able to read a college level textbook and write grammatically correct sentences.
- Credits: 1 to 2 semester course, 1 credit per semester
- Fulfills the Government requirement for all diplomas

AP HUMAN GEOGRAPHY

(HUM GEO AP)

1572

AP Human Geography 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 Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socio-economic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012). Topics include: Geography-Nature and Perspectives, Population and

Migration, Cultural Patterns and Processes, Political Organization of Space, Agriculture, Food Production, and Rural Land Use, Industrialization and Economic Development, and Cities and Urban Land Use.

- Recommended Grade Level: 11, 12
- 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
(*US HIST AP*)

1562

AP United States History is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. AP United States History focuses on developing students' abilities to think conceptually about U.S. history from approximately 1491 to the present and apply historical thinking skills as they learn about the past. Seven themes of equal importance — identity; peopling; politics and power; work, exchange, and technology; America in the world; environment and geography; and ideas, beliefs, and culture — provide areas of historical inquiry for investigation throughout the course. These require students to reason historically about continuity and change over time and make comparisons among various historical developments in different times and places.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: none. Students should be able to read a college level textbook and write grammatically correct, complete sentences.
- Credits: 2 semester course, 1 credit per semester
- Fulfills the US History requirement for all diplomas

CAREER AND TECHNICAL EDUCATION (CTE)

CAREER AND TECHNICAL EDUCATION (CTE) INTRODUCTION

Career and Technical Education (CTE) course titles and descriptions are included in this document under the primary CTE subject area headings of:

- Career and Technical Education (CTE)
- CTE: Agriculture
- CTE: Business, Marketing and IT
- CTE: Engineering/Technology
- CTE: Family and Consumer Sciences
- CTE: Health Science
- CTE: Trade and Industry

CTE: AGRICULTURE

INTRODUCTION

Agriculture is an active part of the curriculum for many high schools in Indiana. This program area combines home, school and community as the means of education in agriculture and natural resources. The courses provide a solid foundation of academic knowledge and hands-on applications through classroom activities, laboratory experiments, project-based learning, supervised agricultural experiences (SAE) and FFA.

The vision and mission of Indiana's Agriculture program is that all people understand and value the vital role of agriculture, food, fiber, and natural resource systems to advance personal and global well-being, prepare students for successful careers, and make a lifetime of informed choices in agriculture.

The Agricultural Education goals are for providing students with learning experiences that will allow them to:

- Demonstrate desirable work ethics and work habits.
- Apply the basic competencies and background knowledge in agriculture and related occupations.
- Analyze entrepreneurial, business and management skills needed to enter agriculture and related occupations.
- Expand leadership and participatory skills necessary for the development of productive and contributing citizenship in our democratic society.
- Gain effective social and interpersonal communication skills.
- Be aware of career opportunities in agriculture and set career objectives.
- Acquire job-seeking, employability and job-retention skills.
- Advance in a career through a program of continuing education and life-long learning.
- Apply reading, writing, mathematics, communication and study skills.
- Recognize the interaction of agriculture with governments and economic systems at the local, state, national and global levels.
- Recognize the ways new technologies impact agriculture and how agriculture impacts the environment.

It is important to understand and reaffirm that career-technical experiences do not preclude students from going on to higher education; in fact, participation enhances the opportunity. A growing number of students are combining college and career preparation in their high school pathway plans. Agriculture and FFA have a long history of successfully preparing students for both entry-level careers and further education in the science, business and technology of agriculture. The programs combine classroom instruction and hands-on career focused learning to develop students' potential for premier leadership, personal growth and career success.

FFA

The FFA student leadership organization is an integral part of a total agricultural education program. Local agriculture teacher(s) serve as the FFA chapter advisors. The many activities of the FFA parallel the methodology of the instructional program and are directly related to the occupational goals and objectives. District and state level FFA activities provide opportunities for students to demonstrate proficiency in the knowledge, skills and aptitudes acquired through the agriculture program. Agriculture students demonstrating a high degree of competence in

state level FFA activities are highly encouraged to represent their local communities, districts and state by participating in national FFA activities.

Instructional activities of the FFA require participation by the agriculture students as an integral part of an agricultural education course of instruction and, therefore, may be considered an appropriate use and amount of the allotted instructional time.

ADVANCED LIFE SCIENCE: ANIMALS (L)

5070

(ALS ANIML)

Advanced Life Science: Animals provides students with opportunities to participate in a variety of activities including laboratory work. Students investigate concepts that enable them to understand animal life and animal science as it pertains to agriculture. Through instruction, including laboratory, fieldwork, leadership development, supervised agricultural experience and the exploration of career opportunities, they will recognize concepts associated with animal taxonomy, life at the cellular level, organ systems, genetics, evolution, and ecology, as well as historical and current issues in animal agriculture in the area of advanced life science in animals.

- Recommended Grade Level: 11, 12
- Required Prerequisite: Animal Science
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources, 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 Core 40 Science requirement for all diplomas
- Qualifies as a quantitative reasoning course

AGRIBUSINESS MANAGEMENT

5002

(AG BUS MGMT)

Agribusiness Management provides foundational concepts in agribusiness. This course introduces students to the principles of business organization and management from a local and global perspective while incorporating technology. Concepts covered in the course include food and fiber, forms of business, finance, marketing, management, sales, leadership development, supervised agricultural experience career opportunities in the area of agribusiness management.

- Recommended Grade Level: 11, 12
- 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 an Elective or Directed Elective for all diplomas
- Qualifies as a quantitative reasoning course

AGRICULTURE POWER, STRUCTURE AND TECHNOLOGY
(AG POW)

5088

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

- Recommended Grade Level: 10, 11, 12
- 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 a Directed Elective or Elective for all diplomas

ANIMAL SCIENCE
(ANML SCI)

5008

Animal Science provides students with an overview of the animal science field. 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 can be applied to both large and small animals. Topics to be addressed include: anatomy and physiology, genetics, reproduction, nutrition, common diseases and parasites, social and political issues related to the industry and management practices for the care and maintenance of animals while incorporating leadership development, supervised agricultural experience and learning about career opportunities in the area of animal science.

- Recommended Grade Level: 10, 11
- 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

INTRODUCTION TO AGRICULTURE, FOOD AND NATURAL RESOURCES
(INT AGFNR)

5056

Introduction to Agriculture, Food and Natural Resources is highly recommended as a prerequisite to and a foundation for all other agricultural classes. The nature of this course is to provide students with an introduction to the fundamentals of agricultural science and business. Topics to be covered include: animal science, plant and soil science, food science, horticultural science, agricultural business management, landscape management, natural resources, agriculture power, structure and technology, leadership development, supervised agricultural experience and career opportunities in the area of agriculture, food and natural resources.

- Recommended Grade Level: 9
- 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

PLANT AND SOIL SCIENCE
(PLT SL SCI)

5170

Plant and Soil Science provides students with opportunities to participate in a variety of activities which includes laboratory work. The following topics are found in this course: plant taxonomy, components and their functions; plant growth, reproduction and propagation; photosynthesis and respiration; environmental factors effecting plant growth, management of plant diseases and pests; biotechnology; the basic components and types of soil; calculation of fertilizer application rates and procedures for application; soil tillage and conservation; irrigation and drainage; land measurement, cropping systems, precision agriculture, principles and benefits of global positioning systems; and harvesting. Leadership development, supervised agricultural experience and career exploration opportunities in the field of plant and soil science are also included.

- Recommended Grade Level: 10, 11
- 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 only

SUPERVISED AGRICULTURAL EXPERIENCE
(SAE)

5228

Supervised Agricultural Experience (SAE) 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 Levels: 10, 11, 12
- Recommended Prerequisite: 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.
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

CTE: BUSINESS, MARKETING, INFORMATION TECHNOLOGY, AND ENTREPRENEURSHIP

INTRODUCTION

Business and industry surveys indicate that economic survival in the 21st Century will demand that students know and understand both fundamental and technical concepts of business as well as possess the ability to execute these concepts in nearly any setting. All persons regardless of age, gender, and career aspirations, can benefit from participating in Business, Marketing, Information Technology, and Entrepreneurship education. These programs provide a foundation for success for *all students*.

Business Professionals of America (BPA)

BPA is a co-curricular student organization conducted on regional, state, and national levels and tests competency in various areas of business/office occupations. The words “Business,” “Professionals,” and “America” define the focus of BPA. Business: The field for which we prepare our students; emphasizes that we educate our students to work efficiently, not only in an office setting, but also in a wide variety of business situations. Professionals: Our students indicate they join BPA to take advantage of a wide variety of professional development opportunities. America: Symbolizes pride in our country and its free enterprise business system. The Special Recognition Awards Program and the Torch Awards Program are open to participation by all chapters and recognizes outstanding, actively involved members on the local, regional, state, and national levels.

DECA (An Association of Marketing Students)

DECA is a co-curricular, international youth organization with emphasis on developing civic consciousness, leadership skills, social intelligence, and vocational understanding within the student members. DECA offers a comprehensive program of competitive events that contribute to the development of skills necessary for careers in marketing, merchandising, management, and entrepreneurship. The DECA Competency-Based Competitive Events Program facilitates effective integration of DECA as an integral component of the total marketing education instructional program. Events are designed to enable students to engage in activities that will extend their interests and skills for careers in marketing and to measure, via performance indicators, the degree to which skills have already been acquired.

Future Business Leaders of America-Phi Beta Lambda (FBLA-PBL)

FBLA-PBL is a co-curricular dynamic organization of young people preparing for success as leaders in our businesses, government, and communities. FBLA has developed a unique value program that develops leadership, communications, and team skills. FBLA is co-curricular and supports the content taught in many Business, Marketing, Information Technology, and Entrepreneurship courses in Indiana. It is a great organization to meet and network with others at the local, state, and national levels.

COMPUTER SCIENCE I
(COM SCI I)

4801

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

- Recommended Grade Level: 10, 11, 12
- Required Prerequisites: Introduction to Computer Science or teacher confirmation of student demonstration of mastery of the Intro to Computer Science standards
- Credits: 2 semester course, 2 semesters required, 1-3 credit per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as a quantitative reasoning course
- Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

COMPUTER SCIENCE II
(CS II PROG)

5236

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
- 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

DIGITAL APPLICATIONS AND RESPONSIBILITY
(DIG APPS RESP)

4528

Digital Applications and Responsibility prepares students to use technology in an effective and appropriate manner in school, in a job, or everyday life. Students develop skills related to word processing, spreadsheets, presentations, and communications software. Students learn what it means to be a good digital citizen and how to use technology, including social media, responsibly. Students expand their knowledge of how to use digital devices and software to build decision-making and problem-solving skills. Students should be provided with the opportunity to seek industry-recognized digital literacy certifications.

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: None
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

INTERACTIVE MEDIA
(INT MEDIA)

5232

Interactive Media prepares students for careers in business and industry working with interactive media products and services; which includes the entertainment industries. This course emphasizes the development of digitally generated or computer-enhanced products using multimedia technologies. Students will develop an understanding of professional business practices including the importance of ethics, communication skills, and knowledge of the “virtual workplace”.

- Recommended Grade Level: 11, 12
- Required Prerequisites: Digital Applications and Responsibility
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana’s Graduation Pathways.

INTRODUCTION TO ACCOUNTING
(INTO ACCT)

4524

Introduction to Accounting 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 Level: 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 the all diplomas

INTRODUCTION TO BUSINESS

4518

(INTO BUSS)

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

- Recommended Grade Level: 9, 10
- Recommended Prerequisites: None
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

INFORMATION TECHNOLOGY SUPPORT I

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: 10, 11
- Required Prerequisites: Digital Applications and Responsibility
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

NETWORKING I

5234

(NET I)

Networking I introduces students to local and wide areanetworks, 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 Level: 11, 12

- Recommended Prerequisites: Information Technology Support I
- 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 II: CYBERSECURITY, CAPSTONE
IT CLUSTER, NETWORK SUPPORT PATHWAY**

5245 (possible offering in 20-21)

Networking II: Cybersecurity is a capstone experience of the Network Support Pathway. It builds upon a base knowledge of Information Technology as gained through lower level courses such as IT support and Networking I. This particular capstone course concentrates on the Security field within networking, also called the cybersecurity field. Laboratory and classroom components are used to cover key elements such as Information Security, Systems Security, Network Security, Mobile Security and, Defense and Mitigation Techniques. The core concepts of confidentiality, integrity, and availability are covered.

- Recommended Grade Level: 12
- Required Prerequisites: Networking I
- 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 II: INFRASTRUCTURE

(NET II INFRA)

4588

Networking II: Infrastructure focuses on learning the fundamentals of networking, routing, switching and related protocols. In this course, students learn both the practical and conceptual skills that build the foundation for understanding basic networking, routing and switching. Students are introduced to the two major models used to plan and implement networks: OSI and TCP/IP. The OSI and TCP/IP functions and services are examined in detail. Students will learn how a router addresses remote networks and determines the best path to those networks, employing static and dynamic routing techniques.

- Recommended Grade Level: 12
- Required Prerequisites: Networking I
- 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

PERSONAL FINANCIAL RESPONSIBILITY

(PRS FIN RSP)

4540

Personal Financial Responsibility addresses the identification and management of personal financial resources to meet the financial needs and wants of individuals and families, considering a broad range of economic, social, cultural, technological, environmental, and maintenance factors. This course helps students build skills in financial responsibility and decision making; analyze personal standards, needs, wants, and goals; identify sources of

income, saving and investing; understand banking, budgeting, record-keeping and managing risk, insurance and credit card debt. 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 Level: 9
- Recommended Prerequisites: None
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Qualifies as one of the FACS courses a student can take to waive the Health & Wellness graduation requirement. To qualify for a waiver, a student must take three of the approved courses. For more information, please see 511 IAC 6-7.1-4(c) (6).
- Counts as a Directed Elective or Elective for all diplomas

CTE: ENGINEERING/TECHNOLOGY

CIVIL ENGINEERING AND ARCHITECTURE

4820 PLTW

(CEA)
(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 resource, 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: Use of the PLTW Course number is limited to schools that have agreed to be part of the Project Lead the Way network and follow all training and data collection requirements.**

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Introduction to Engineering Design and Principles of Engineering
- 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
- Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

CONSTRUCTION SYSTEMS

4782

(CONS SYST)

Construction Systems is a course that specializes in how people use modern construction systems and the management of resources to efficiently produce a structure on a site. Students will explore the application of tools, materials, and energy in designing, producing, using, and assessing the construction of structures. Classroom activities introduce students to the techniques used in applying construction technology to the production of residential, commercial, and industrial buildings in addition to civil structures. Students learn how architectural ideas are converted into projects and how projects are managed during a construction project in this course.

- Recommended Grade Level: 9, 10
- Recommended Prerequisite: none
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Counts as a Directed Elective or Elective for all diplomas

DIGITAL ELECTRONICS

4826 PLTW

(DE)
(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: Use of the PLTW Course number is limited to schools that have agreed to be part of the Project Lead the Way network and follow all training and data collection requirements.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Introduction to Engineering Design and Principles of Engineering
- 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
- Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

ENGINEERING DESIGN AND DEVELOPMENT

4828 PLTW

(EDD)
(ENG DES DEV)

Engineering Design and Development is an engineering research course in which students work in teams to research, design, test, and construct a solution to an open-ended engineering problem. The product development life cycle and a design process are used to guide the team to reach a solution to the problem. The team/ and or individuals 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: Use of the PLTW Course number is limited to schools that have agreed to be part of the Project Lead the Way network and follow all training and data collection requirements.**

- Recommended Grade Level: 12
- Recommended Prerequisites: Introduction to Engineering Design, Principles of Engineering Design, and one pre-engineering specialty course
- Credits: 2 semester course, 2 semesters required, 1-3s credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as a quantitative reasoning course
- Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

INTRODUCTION TO CONSTRUCTION (INT CONST)

4792

Introduction to Construction is a course that will offer hands-on activities and real world experiences related to the skills essential in residential, commercial and civil building construction. During the course students will be introduced to the history and traditions of construction trades. The student will also learn and apply knowledge of the care and safe use of hand and power tools as related to each trade. In addition, students are introduced to blueprint reading, applied math, basic tools and equipment, and safety. Students will demonstrate building construction techniques, including concrete and masonry, framing, electrical, plumbing, dry walling, HVAC, and painting as developed locally in accordance with available space and technologies. Students learn how architectural ideas are converted into projects and how projects are managed during a construction project in this course. Students study construction technology topics such as preparing a site, doing earthwork, setting footings and foundations, building the superstructure, enclosing the structure, installing systems, finishing the structure, and completing the site. Students also investigate topics related to the purchasing and maintenance of structures, special purpose facilities, green construction and construction careers.

- Recommended Grade Level: 10
- 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

INTRODUCTION TO ENGINEERING DESIGN (IED) (INT ENG DES)

4812 PLTW

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: Use of the PLTW Course number is limited to schools that have agreed to be part of the Project Lead the Way network and follow all training and data collection requirements.

- Recommended Grade Level: 9
- 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 ENGINEERING (POE)

4814 PLTW

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. **NOTE: Use of the PLTW Course number is limited to schools that have agreed to be part of the Project Lead the Way network and follow all training and data collection requirements.**

- Recommended Grade Level: 10, 11
- Required Prerequisites: Introduction to Engineering Design
- 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

ROBOTICS DESIGN AND INNOVATION (RDI)

4728

Robotics Design and Innovation allows students to design, program, and test innovative technological designs related to robotic systems. Topics involve mechanics, pneumatics, control technologies, computer fundamentals, and programmable control technologies. Students design, build, and optimize robots to perform a variety of predesignated tasks. Individuals or small teams may choose to participate in organized robotic competitions or develop their own events during the course. Through this course, students will investigate exciting career and collegiate programs of study.

- Recommended Grade Level: 9, 10, 11, 12
- 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
- Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

CTE: FAMILY AND CONSUMER SCIENCES

INTRODUCTION

Family and Consumer Sciences has roots in both academic and career and technical education and easily reaches beyond the education system into the community as it focuses on the needs of individuals and families. Essential preparation for success of all students includes acquisition of problem-solving, decision-making, higher order thinking, communication, literacy, and numerical skills in applied contexts. As the future members and leaders of tomorrow's families, workplaces, and communities, students need to be able to act responsibly and productively, to synthesize knowledge from multiple sources, to work cooperatively, and to apply the highest standards in all aspects of their lives.

High school Family and Consumer Sciences is organized into a variety of semester-long and year-long courses. State-approved high school Family and Consumer Sciences courses and the curriculum framework for each course provide guidelines for local High school Family and Consumer Sciences programs that focus on building strong and resilient individuals and families and helping students manage personal and family issues. The High school Family and Consumer Sciences course frameworks reflect the current vision and mission statements for Family and Consumer Sciences and the 2018 High school Family and Consumer Sciences National Standards and provide consistency among High school Family and Consumer Sciences programs across the state.

FCCLA

Family, Career & Community Leaders of America is the official student organization for Family and Consumer Sciences Education in Indiana and across the country. The FCCLA organization helps students develop leadership and citizenship skills while synthesizing and applying Family and Consumer Sciences content and skills in family, workplace, and community settings. As a teaching/learning approach, FCCLA offers teacher-developed and student-tested strategies and materials that center the responsibility for achieving FACS standards on students through in-class and co-curricular chapter programs and projects.

ADULT ROLES AND RESPONSIBILITIES

5330

(ADULTEROLES)

Adult Roles and Responsibilities is recommended for all students as life foundations and academic enrichment, and as a career sequence course for students with interest in family and community services, personal and family finance, and similar areas. This course builds knowledge, skills, attitudes, and behaviors that students will need as they complete high school and prepare to take the next steps toward adulthood in today's society. The course includes the study of interpersonal standards, lifespan roles and responsibilities, individual and family resource management, and financial responsibility and resources. A project-based approach that utilizes higher order thinking, communication, leadership, management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of adult roles and responsibilities. Direct, concrete mathematics and language arts proficiencies will be applied. Service learning and other authentic applications are strongly

recommended. This course provides the foundation for continuing and post-secondary education in all career areas related to individual and family life.

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Qualifies as one of the F&CS courses a student can take to waive the Health & Wellness graduation requirement, in place of either Human Development and Wellness or Interpersonal Relationships. To qualify for the Health and Wellness waiver, a student must take three of the approved courses. For more information, see 511 IAC 6-7.1-4(c)(6).
- Counts as a Directed Elective or Elective for all diplomas

ADVANCED CHILD DEVELOPMENT

5360

(ADVCHLDDEV)

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

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: Child Development
- Credits: 1 or 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

CULINARY ARTS AND HOSPITALITY I

5440

(CULART HOSP)

Culinary Arts and Hospitality I prepares students for occupations and higher education programs of study related to the entire spectrum of careers in the hospitality industry. This course builds a foundation that prepares students to enter the Advanced Culinary Arts or Advanced Hospitality courses. Major topics include: introduction to the hospitality industry; food safety and personal hygiene; sanitation and safety; regulations, procedures, and emergencies; basic culinary skills; culinary math; and food preparation techniques and applications; principles of purchasing, storage, preparation, and service of food and food products; ; apply basic principles of sanitation and safety in order to maintain safe and healthy food service and hospitality environments; use and maintain related tools and equipment; and apply management

principles in food service or hospitality operations. Intensive laboratory experiences with commercial applications are a required component of this course of study. Student laboratory experiences may be either school-based or "on-the-job" or a combination of the two. Work based experiences in the food industry are strongly encouraged. A standards-based plan guides the students' laboratory experiences. Students are monitored in their laboratory experiences by the *Culinary Arts and Hospitality* teacher. Articulation with post-secondary programs is encouraged.

Recommended Grade Level: 11,12

- Recommended Prerequisites: Nutrition and Wellness, Introduction to Culinary Arts & Hospitality
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

CULINARY ARTS AND HOSPITALITY II: CULINARY ARTS

5346

(*CUL HOSP II: CUL ARTS*)

Culinary Arts and Hospitality II: Culinary Arts prepares students for occupations and higher education programs of study related to the entire spectrum of careers in the food industry, including (but not limited to) food production and services; food science, dietetics, and nutrition; and baking and pastry arts. Major topics for this advanced course include: basic baking theory and skills, introduction to breads, introduction to pastry arts, nutrition, nutrition accommodations and adaptations, cost control and purchasing, and current marketing and trends. Instruction and intensive laboratory experiences include commercial applications of principles of nutrition, aesthetic, and sanitary selection; purchasing, storage, preparation, and service of food and food products; using and maintaining related tools and equipment; baking and pastry arts skills; managing operations in food service, food science, or hospitality establishments; providing for the dietary needs of persons with special requirements; and related research, development, and testing. Intensive laboratory experiences with commercial applications are a required component of this course of study. Student laboratory experiences may be either school-based or "on-the-job" or a combination of the two. *Advanced Culinary Arts* builds upon skills and techniques learned in *Culinary Arts and Hospitality Management*, which must be successfully completed before enrolling in this advanced course. Work based experiences in the food industry are strongly encouraged. A standards-based plan guides the students' laboratory and work based experiences. Students are monitored in these experiences by the *Advanced Culinary Arts* teacher. Articulation with post-secondary programs is encouraged.

- Recommended Grade Level: 12
- Required Prerequisites: Culinary Arts and Hospitality I
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

EARLY CHILDHOOD EDUCATION I

5412

(*ECE I*)

Early Childhood Education prepares students for employment in early childhood education and

related careers that involve working with children from birth to 8 years (3rd grade) and provides the foundations for study in higher education that leads to early childhood education and other child-related careers. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes is recommended in order to integrate the study of suggested topics. Major course topics include: career paths in early childhood education; promoting child development and learning; building family and community relationships; observing, documenting, and assessing to support young children and families; using developmentally effective approaches; using content knowledge to build meaningful curriculum, and becoming an early childhood education professional. The course provides an overview of the history, theory, and foundations of early childhood education as well as exposure to types of programs, curricula, and services available to young children. Students examine basic principles of child development, importance of family, licensing, and elements of quality care of young children. The course addresses planning and guiding developmentally appropriate activities for young children in various childcare settings; developmentally appropriate practices of guidance and discipline; application of basic health, safety, and nutrition principles when working with children; overview of management and operation of licensed child care facilities or educational settings; child care regulations and licensing requirements; and employability skills. Intensive experiences in one or more early childhood settings, resumes, and career portfolios are required components. A standards-based plan for each student guides the laboratory/field experiences. Students are monitored in their laboratory/field experiences by the Early Childhood Education teacher. Student laboratory/field experiences may be either school-based or "on-the-job" in community-based early childhood education centers or in a combination of the two. Dual credit agreements with post-secondary programs are encouraged.

- Recommended Grade Level: 11, 12
- Required Prerequisite: Advanced Child Development
- Recommended Prerequisites: Nutrition and Wellness, Child Development, and
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

EARLY CHILDHOOD EDUCATION II

5406

(ECE II)

Early Childhood Education II prepares students for employment in early childhood education and related careers that involve working with children from birth to 8 years (3rd grade) and provides the foundations for study in higher education that leads to early childhood education and other child-related careers. *ECE II* is a sequential course that builds on the foundational knowledge and skills of *Early Childhood Education I*, which is a required prerequisite. In *ECE II* students further refine, develop, and document the knowledge, skills, attitudes, and behaviors gained in the foundational course. Major topics of *ECE II* include: overview of the Child Development Associate (CDA) credential, safe and healthy learning environment, physical and intellectual competence, social and emotional development, relationships with families, program management, and professionalism. The course standards parallel the expectations and documentation required for Child Development Associate (CDA) credentialing. These include rigorous levels of self-critique and reflection; performance assessments by instructors, parents, and other professionals; comprehensive assessment of knowledge through a standardized exam; and other professional documentation. Extensive experiences in one or more early childhood education settings are required: a minimum total of 480 hours must be accrued in *ECE I* and *ECE II*. These experiences may be either school-based or "on-the-job" in community-

based early childhood education centers, or in a combination of the two. A standards-based plan for each student guides the early childhood education experiences. Students are monitored in these experiences by the *Early Childhood Education II* teacher. Dual credit agreements with post-secondary programs are encouraged.

- Recommended Grade Level: 12
- Required Prerequisites: Early Childhood Education I
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.
-

HUMAN DEVELOPMENT AND WELLNESS

(HUMAN DEV)

5366

Human Development and Wellness is valuable for all students as a life foundation and academic enrichment; it is especially relevant for students interested in careers impacted by individuals' physical, social, emotional, and moral development and wellness across the lifespan. Major topics include principles of human development and wellness; impacts of family on human development and wellness; factors that affect human development and wellness; practices that promote human development and wellness; managing resources and services related to human development and wellness; and career exploration in human development and wellness. Life events and contemporary issues addressed in this course include (but are not limited to) change; stress; abuse; personal safety; and relationships among lifestyle choices, health and wellness conditions, and diseases. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes is recommended in order to integrate the study of these topics. Authentic applications through service learning are encouraged.

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: none
- Credits: 1-2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as one of the F&CS courses a student can take to waive the Health & Wellness graduation requirement. To qualify for the Health and Wellness waiver, a student must take three of the approved courses. For more information, see 511 IAC 6-7.1-4(c)(6).

INTERPERSONAL RELATIONSHIPS

(INTRP RLT)

5364

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

- Recommended Grade Level: 10, 11
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Counts as a Directed Elective or Elective for all diplomas; local programs have the option of offering a second version of the course that is focused more on family relations. Such a course may be differentiated from the regular course offering by using a subtitle in addition to *Interpersonal Relationships*. A student may earn credits for both versions of the course. No waiver is required in this instance.
- Qualifies as one of the F&CS courses a student can take to waive the Health & Wellness graduation requirement. To qualify for the Health and Wellness waiver, a student must take three of the approved courses. For more information, see 511 IAC 6-7.1-4(c)(6).

INTRODUCTION TO CULINARY ARTS AND HOSPITALITY

(INT CUL HOS)

5438

Introduction to Culinary Arts and Hospitality is recommended for all students regardless of their career cluster or pathway, in order to build basic culinary arts knowledge and skills. It is especially appropriate for students with an interest in careers related to Hospitality, Tourism, and Culinary Arts. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes is recommended. Topics include basic culinary skills in the foodservice industry, safety and sanitation, nutrition, customer relations and career investigation. Students are able to explore this industry and examine their own career goals in light of their findings. Laboratory experiences that emphasize industry practices and develop basic skills are required components of this course.

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

INTRODUCTION TO FASHION AND TEXTILES

5380

(FSHNTX)

Introduction to Fashion and Textiles is an introductory course for those students interested in academic enrichment or a career in the fashion, textile, and apparel industry. This course addresses knowledge and skills related to design, production, acquisition, and distribution in the fashion, textile, and apparel arena. The course includes the study of personal, academic, and career success; careers in the fashion, textile, and apparel industry; factors influencing the merchandising and selection of fashion, textile, and apparel goods and their properties, design, and production; and consumer skills. A project-based approach integrates instruction and laboratory experiences including application of the elements and principles of design, aesthetics, criticism, history and production; selection, production, alteration, repair, and maintenance of apparel and textile products; product research, development, and testing; and application of technical tools and equipment utilized in the industry. Direct, concrete mathematics proficiencies will be applied. Service learning and other authentic applications are strongly recommended. This course provides the foundation for continuing and post-secondary education in fashion, textile, and apparel-related careers.

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: none
- Credits: 1-2 semester course, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma

NUTRITION AND WELLNESS

5342

(NTRN WLNS)

Nutrition and Wellness is an introductory course valuable for all students as a life foundation and academic enrichment; it is especially relevant for students interested in careers related to nutrition, food, and wellness. This is a nutrition class that introduces students to only the basics of food preparation so they can become self-sufficient in accessing healthy and nutritious foods. Major course topics include nutrition principles and applications; influences on nutrition and wellness; food preparation, safety, and sanitation; and science, technology, and careers in nutrition and wellness. A project-based approach that utilizes higher order thinking, communication, leadership, management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of nutrition, food, and wellness. Food preparation experiences are a required component. Direct, concrete mathematics and language arts proficiencies will be applied. This course is the first in a sequence of courses that provide a foundation for continuing and post-secondary education in all career areas related to nutrition, food, and wellness.

- Recommended Grade Level: 9, 10
- Recommended Prerequisites: none
- Credits: 1 credit per semester, 1 credit maximum
- Counts as a Directed Elective or Elective for all diplomas

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 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 Level: 9
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Qualifies as one of the F&CS courses a student can take to waive the Health & Wellness graduation requirement. To qualify for a waiver, a student must take three of the approved courses. For more information, please see 511 IAC 6-7.1-4(c)(6).
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as a quantitative reasoning course

CTE: HEALTH SCIENCE

INTRODUCTION

The Health Science Career Cluster is a rich content area that prepares students for employment and/or continuing education opportunities in the field of healthcare through technical instruction in the classroom, experiential education in the laboratory setting, and work based learning opportunities in a variety of clinical settings. That preparation is accomplished through the integration of academics, specific health science technology courses, and a variety of problem-based and work based learning opportunities. Work based learning may include job shadowing, internships, and other clinical experiences that allow students the opportunities to observe and learn from a variety of healthcare professionals.

The Health Science Career Cluster is organized into a variety of semester-long and year-long state-approved courses which lead to content driven Pathways of study. Every Health Science course and Pathway of study provides students with opportunities to explore a variety of health careers, and assists them towards the goal of making realistic and satisfying career choices in the healthcare industry following graduation from high school.

HOSA-Future Health Professionals is the official Career and Technical Student Organization (CTSO) for Health Science in Indiana and across the country. HOSA provides students with opportunities to develop their leadership and citizenship potential, while applying Health Science content skills into their family, workplace and community settings. Students in the Health Science Career Cluster leave high school better prepared for further education and/or immediate employment in the healthcare field.

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: 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 Core 40 Science course requirement for all diplomas

HEALTH SCIENCE EDUCATION I (*HLTH ED I*)

5282

Health Science Education I is a course designed to provide a foundation of skills development to specific health careers including; patient care, nursing care, dental care, animal care, medical laboratory, and public health. Students will also receive an introduction to healthcare systems, anatomy, physiology, and medical terminology. Laboratory experiences with industry applications are organized and planned around the activities associated with the student's career objectives. Job seeking and job maintenance skills, personal management skills, self-analysis to aid in career selection and completion of the application process for admission into a post-secondary program of their choice are also included in this course. Participation in HOSA encourages the development of leadership, communication and career related skills, and opportunities for community service.

- Recommended Grade Level: 11
- Recommended Prerequisites: Introduction to Health Science Careers
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, maximum of 6 credits
- Counts as a Directed Elective or Elective for all diplomas
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

HEALTH SCIENCE EDUCATION II: PHARMACY (*HSE II PHARM*)

5214

Health Science Education II: Pharmacy is an extended laboratory experience designed to provide students with the opportunity to assume the role of pharmacy technician and practice technical skills previously learned in the classroom; all while working at the student's choice of clinical site and under the direction of licensed pharmacists. These sites may include pharmacies found in grocery and drug stores, or in long term facilities. Throughout the course, students will focus on learning about the healthcare system and employment opportunities at a variety of entry levels; an overview of the healthcare delivery systems, healthcare teams, and legal and ethical considerations; and obtaining the knowledge, skills and attitudes essential for providing basic care in a variety of healthcare settings. Additionally, students will build their essential job related skills to; record patient information, count tablets and measure medications, mix medications or ointments, package and label prescriptions, accept payment and process insurance claims, and do routine pharmacy tasks such as organizing medications, inventory, taking phone calls, cleaning, and customer service. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from school to work in health science careers. Students are encouraged to focus on self-analysis to aid in their career selection. Job seeking and job maintenance skills, personal management skills, and completion of the application process for admission into a post-secondary program are also areas of focus. Participation in HOSA encourages the development of leadership, communication and career related skills, and opportunities for community service.

- Recommended Grade Level: 12
- Required Prerequisites: Health Science Education I
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, maximum of 6 credits.

- Counts as a Directed Elective or Elective for all diplomas
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

MEDICAL TERMINOLOGY (MED TERMS)

5274

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 Level: 11, 12
- 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

maintenance, purchasing, and food preparation; managing operations in food production, food

PLTW HUMAN BODY SYSTEMS (HUMAN SYST)

5216

(planning to implement this course in 2021-2022)

PLTW Human Body Systems is a course designed to engage students in the study of basic human physiology and the care and maintenance required to support the complex 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: Use of the PLTW Course number is limited to schools that have agreed to be part of the Project Lead the Way network and follow all training and data collection requirements.**

- Recommended Grade Level: 10
- Recommended Prerequisites: Principles of the Biomedical Sciences
- 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 Core 40 Science requirement for all diplomas

PLTW MEDICAL INTERVENTIONS

(MED INTERV)

5217

(planning to implement this course in 2022-2023)

PLTW Medical Interventions is a course that studies medical practices including interventions to support humans in treating disease and maintaining health. Using a project-based learning approach, students will investigate various medical interventions that extend and improve quality of life, including gene therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Students will also study the design and development of various interventions. Lessons will cover the history of organ transplants and gene therapy with additional readings from current scientific literature addressing cutting edge developments. **NOTE: Use of the PLTW Course number is limited to schools that have agreed to be part of the Project Lead the Way network and follow all training and data collection requirements.**

- Recommended Grade Level: 11
- Required Prerequisites: Principles of the Biomedical Sciences; Human Body Systems
- 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 Core 40 Science requirement for all diploma types
- Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

PLTW PRINCIPLES OF BIOMEDICAL SCIENCES

(PRIN BIOMED)

5218

(planning to implement this course in 2020-2021)

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

- Recommended Grade Level: 9
- Required Prerequisites: Biology I or concurrent enrollment in Biology I is required
- 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 Core 40 Science requirement for all diplomas

CTE: TRADE AND INDUSTRY

ADVANCED MANUFACTURING I

(ADV MFTG I)

5608

Advanced Manufacturing I is a course that includes classroom and laboratory experiences in two broad areas: Industrial Technology/Software Controls and Manufacturing Trends. Domains include safety and impact, electricity, manufacturing essentials, fluid power principals, mechanical principals, lean manufacturing, and careers in advanced manufacturing. Hands-on projects and team activities will allow students to apply learning on the latest industry technologies. Students take this course with the goal of being a skilled machine operator, repair technician, or working in management at any company that produces goods and services using advanced manufacturing techniques. Work based learning experiences and industry partnerships are highly encouraged for an authentic industry experience.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Introduction to Advanced Manufacturing
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

ADVANCED MANUFACTURING II

(ADV MFTG II)

5606

Advanced Manufacturing II builds on classroom and lab experiences students experienced in Advanced Manufacturing I. Domains include safety and impact, drafting principles, manufacturing programming, CAD/CAM and CNC technologies, automation and robotics, and careers in advanced manufacturing. Hands-on projects and team activities will allow students to apply learning on the latest industry technologies. Students continue this course with the goal of being a skilled machine operator, repair technician, or management at any company that produces goods and services using advanced manufacturing techniques. Work based learning experiences and industry partnerships are highly encouraged for an authentic industry experience.

- Recommended Grade Level: 12
- Required Prerequisites: Advanced Manufacturing I
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways OR Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

AUTOMOTIVE SERVICES TECHNOLOGY I
(AUTO TECH I)

5510

Automotive Services Technology I is a one year course that encompasses the sub topics of the NATEF/ ASE identified areas of Steering & Suspension and Braking Systems. This one year course offering may be structured in a series of two topics per year offered in any combination of instructional strategies of semester based or yearlong instruction. Additional areas of manual transmissions and differentials, automatic transmissions, air conditioning, and engine repair should be covered as time permits. This one year offering must meet the NATEF program certifications for the two primary areas offered in this course. This course provides the opportunity for dual credit for students who meet post-secondary requirements for earning dual credit and successfully complete the dual credit requirements of this course. Mathematical skills will be reinforced through precision measuring activities as well as cost estimation and calculation activities. Scientific principles taught and reinforced in this course include the study of viscosity, friction, thermal expansion, and compound solutions. Written and oral skills will also be emphasized to help students communicate with customers, colleagues, and supervisors.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Introduction to Transportation
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

AUTOMOTIVE SERVICES TECHNOLOGY II
(AUTO TECH II)

5546

Automotive Services Technology II is a one year course that encompasses the sub topics of the NATEF/ASE identified areas of Electrical Systems and Engine Performance. This one year course offering may be structured in a series of two topics per year offered in any combination of instructional strategies of semester based or yearlong instruction. Additional areas of manual transmissions /differentials, automatic transmissions, air conditioning, and engine repair should be covered as time permits. This one-year offering must meet the NATEF program certifications for the two primary areas offered in this course. Mathematical skills will be reinforced through precision measuring activities and cost estimation/calculation activities. Scientific principles taught and reinforced in this course include the study of viscosity, friction, thermal expansion, and compound solutions. Written and oral skills will also be emphasized to help students communicate with customers, colleagues, and supervisors.

- Recommended Grade Level: 12
- Required Prerequisites: Automotive Services Technology I
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

5580

CONSTRUCTION TRADES I
(CONST TECH I)

Construction Trades I classroom and laboratory experiences involve the formation, installation, maintenance, and repair of buildings, homes, and other structures. A history of construction, future trends and career options, reading technical drawings and transforming those drawings into physical structures are covered. The relationship of views and details, interpretation of dimension, transposing scale, tolerance, electrical symbols, sections, materials list, architectural plans, geometric construction, three dimensional drawing techniques, and sketching will be presented as well as elementary aspects of residential design and site work. Areas of emphasis will include print reading and drawing, room schedules and plot plans. Students will examine the design and construction of floor and wall systems and develop layout and floor construction skills. Blueprints and other professional planning documents will also be covered. Students will develop an understanding and interpretation of the Indiana Residential Code for one and two-family dwellings and safety practices including Occupational Safety and Health Administration Safety and Health Standards for the construction industry.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Introduction to Construction
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

5578

CONSTRUCTION TRADES II
(CONST TRA II)

Construction Trades II builds on the formation, installation, maintenance, and repair skills learned in Construction Trades I. Information on materials, occupations, and professional organizations within the industry will be covered. Students will develop basic knowledge, skills, and awareness of interior trim and the installation of drywall, moldings, interior doors, kitchen cabinets, and baseboard moldings. Students will also develop exterior finishing competencies. The course includes instruction on the installation of cornices, windows, doors and various types of sidings currently used in industry. Studies will also focus on the design and construction of roof systems and the use of framing squares for traditional rafter and truss roofing.

- Recommended Grade Level: 12
- Required Prerequisites: Construction Trades I
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

CONSTRUCTION TRADES: HVAC I
(CONST HVAC I)

5496

Construction Technology: HVAC I includes classroom and laboratory experiences focused on heat generation, ventilation, and cooling/refrigeration systems. This course introduces scientific and mathematical principles applicable in the installation, operation, and maintenance of HVAC systems. Types of units, parts, basic controls, functions, and applications will be covered. Additional topics include tool and meter use, temperature measurement, heat flow, the combustion process, and pipe installation practices. This course also emphasizes health, safety, and welfare standards and codes as mandated by professional and governmental agencies.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Introduction to Construction
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

CONSTRUCTION TRADES: HVAC II
(CONST HVAC II)

5498

Construction Technology: HVAC II builds on concepts introduced in HVAC I. This course will emphasize reading blueprints and other technical documents, as well as troubleshooting common mechanical and electrical problems encountered when servicing HVAC systems. Additional topics include: combustion testing, venting and air requirements, electrical control systems, and electrical motor basics. Students will hone their science and math skills in HVAC system installation, maintenance, or repair projects.

- Recommended Grade Level: 12
- Required Prerequisites: Construction Trades: HVAC I
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

COSMETOLOGY I
(CSMTLGY I)

5802

Cosmetology I offers an introduction to cosmetology with an emphasis on basic practical skills and theories including roller control, quick styling, shampooing, hair coloring, permanent waving, facials, manicuring, business and personal ethics, bacteriology, and sanitation. In the second semester greater emphasis is placed on the application and development of these skills. The State of Indiana requires a total of 1500 hours of instruction for licensure.

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

- Counts as Directed Elective or Elective for all diplomas

COSMETOLOGY II
(CSMTLGY II)

5806

Cosmetology II builds on concepts learned in Cosmetology I with an emphasis on the development of advanced skills in styling, hair coloring, permanent waving, facials and manicuring. Students will also study anatomy and physiology, professionalism, and salon management in relation to cosmetology.

- Recommended Grade Level: 12
- Required Prerequisites: Cosmetology I
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

CRIMINAL JUSTICE I
(CRIME I)

5822

Criminal Justice I Introduces specialized classroom and practical experiences related to public safety occupations such as law enforcement, loss prevention services, and homeland security. This course provides an introduction to the purposes, functions, and history of the three primary parts of the criminal justice system as well as an introduction to the investigative process. Oral and written communication skills should be reinforced through activities that model public relations and crime prevention efforts as well as the preparation of police reports. This course provides the opportunity for dual credit for students who meet post-secondary requirements for earning dual credit and successfully complete the dual credit requirements of this course.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

EMERGENCY MEDICAL SERVICES
(EMS)

5210

Emergency Medical Services prepares students for a state certification which may lead to a career in Emergency Medical Services. Examples of those careers include Emergency Medical Technician and Paramedic. This course is designed for persons desiring to perform emergency medical care. Theories, techniques, and operational aspects of pre-hospital emergency care, within the scope and responsibility of the basic emergency medical technician are covered in this course. Students will learn to recognize the seriousness of the patient's condition, use the appropriate emergency care techniques and equipment to stabilize the patient, and safely transport them to the hospital. The handling of victims of hazardous materials accidents is also addressed in this course. Opportunities for laboratory practice and clinical observation in a hospital emergency room and ambulance are also included to provide occasions for students to

further develop clinical skills and the appropriate ethical behavior. Leadership skills are developed and community service opportunities are provided through participation in HOSA. Students have the opportunity to compete in a number of competitive events at both the state and national level.

- Recommended Grade Level: 12
- Required Prerequisites: Health Science Education I
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, maximum of 6 credits
- Counts as a Directed Elective or Elective for all diplomas
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

ENERGY INDUSTRY I

(ENG IND I)

5616

Energy Industry I introduces students to basic concepts in energy delivery as well as maintaining energy related facilities and equipment. This course includes basic electric theory focused on safety and professional standards. Students will also explore the relationship between Alternative and Green Energy as it relates to the delivery of gas and electricity. This course includes field trips, on-site training, mentors, and project-based learning activities in the Energy Industry.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Introduction to Construction
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as an Elective for all diplomas
- Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

ENERGY INDUSTRY II

(ENG IND II)

5618

Energy Industry II builds on skills learned in Energy Industry I. This curriculum includes electrical installation and generation and will touch on natural gas services. Students will have the opportunity to experience career internships, participate with field mentors, carry out a culminating senior project and participate in field trips related to their area of interest. Industry partners would include Energy companies, Electricians Unions, the steel industry, and manufacturing companies.

- Recommended Grade Level: 11, 12
- Required Prerequisites: Energy Industry I
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective, Elective for all diplomas
- Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

FIRE AND RESCUE I
(FIRE RSCU I)

5820

Fire and Rescue I; Every year, fires and other emergencies take thousands of lives and destroy property worth billions of dollars. Firefighters and emergency services workers help protect the public against these dangers by rapidly responding to a variety of emergencies. 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. The Fire and Rescue curriculum may include five Indiana state fire certifications: (1) Mandatory, (2) Firefighter I, (3) Firefighter II, (4) Hazardous Materials Awareness, and (5) Hazardous Materials Operations. An additional two industry certifications may be earned by adding (6) First Responder, and (7) Emergency Medical Technician-Basic to the curriculum.

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

INDUSTRIAL AUTOMATION AND ROBOTICS I

(AUTO ROB I)

5610

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

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Digital Electronics
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as an Elective for all diplomas
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

INDUSTRIAL AUTOMATION AND ROBOTICS II
(AUTO ROB II)

5612

Industrial Automation and Robotics II, focuses on industrial robots, programming PLC's, automating cells, advanced programming, and designing/building task oriented robots. Students will engage in active learning, critical thinking, and problem solving through advanced robotic procedures and processes. Students will learn industrial robotic programming languages, as well as strategies for improving efficiency through automation. Students will study basic computer numerical controlled (CNC) machining and will combine automation and CNC machining to perform common industrial tasks. They will also apply knowledge to real world situations to create working solutions.

- Recommended Grade Level: 11, 12
- Required Prerequisites: Industrial Automation and Robotics I
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

PRECISION MACHINING I
(PCSN MACH I)

5782

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

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: Introduction to Advanced Manufacturing
- Credits: 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Qualifies as a quantitative reasoning course
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

PRECISION MACHINING II
(PCSN MACH II)

5784

Precision Machining II is a more in-depth study of skills learned in Precision Machining I, with a stronger focus in CNC setup/operation/programming. Classroom activities will concentrate on precision set-up and inspection work as well as machine shop calculations. Students will develop skills in advanced machining and measuring parts involving tighter tolerances and more complex geometry. A continued focus on safety will also be included.

- Recommended Grade Level: 12
- Required Prerequisites: Precision Machining I

- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

WELDING TECHNOLOGY I
(WELD TECH I)

5776

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

- Recommended Grade Level: 11, 12
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

WELDING TECHNOLOGY II
(WELD TECH II)

5778

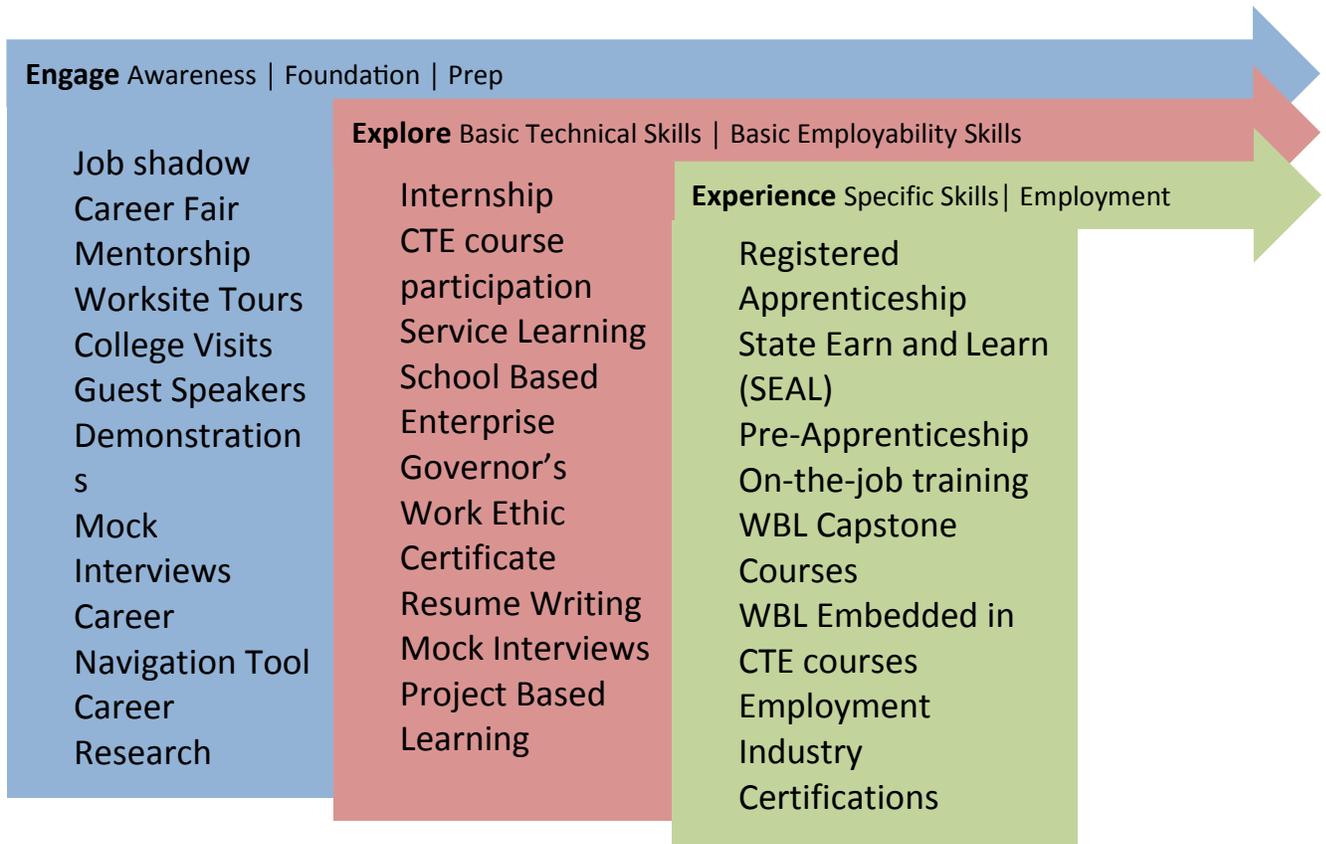
Welding Technology II builds on the skills covered in Welding Technology I. Emphasis is placed on safety at all times. OSHA standards and guidelines endorsed by the American Welding Society (AWS) are used. Instructional activities emphasize properties of metals, safety issues, blueprint reading, electrical principles, welding symbols, and mechanical drawing through projects and exercises that teach students how to weld and be prepared for college and career success.

- Recommended Grade Level: 12
- Required Prerequisites: Welding Technology I
- 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
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

CTE: WORK BASED LEARNING

Work Based Learning (WBL) means sustained interactions with industry or community professionals in real workplace settings, to the extent practicable, or simulated environments at an educational institution that foster in-depth, first hand engagement with the tasks required of a given career field, that are aligned to curriculum and instruction.

Progressions of opportunities leading to meaningful Work Based Learning Capstone courses: Students should progress through these stages of the career education continuum on their path to career readiness.



A **clear partnership agreement and training plan** are developed by the student, teacher, and workplace mentor/supervisor to guide the student's work based experiences and assist in evaluating achievement and performance, whether WBL is a stand-alone course or embedded within a Career and Technical Education course.

The WBL training plan and partnership agreement must include the following:

- location of work experience
- supervisor name and contact information
- work based learning teacher name and contact information

- specific work duties and/or detailed description of experience
- competencies or standards that will be addressed by the experience
- work experience schedule and corresponding classroom instruction schedule
- work experience hourly wage or payment amount
- parent/guardian or emancipated student signature
- school/career center administrator signature

Key components of Work Based Learning Capstone Course:

- Students shall demonstrate proficiency of the academic standards taught in the related instruction portion of the class. The school shall offer the related instruction class concurrently with the student's work based experience. Hour requirements vary depending on the type of work based program a school chooses to use, please see the Work Based Learning manual for more information.
- Safety is an integral part of the instructional program, both in the related instruction and at the training site.
- Students may be allowed time from the daily school schedule to work at the participating employers' places of business.
- The Work Based experience must align to the student's pathway
- The WBL teacher and WBL Coordinator shall perform frequent site visits to student placements to supervise students and coordinate with personnel at the placement. These site visits should be done during the same time the student is at the placement. Site visits must be documented and records of these site visits must be kept for a period of five (5) years.
- Any Local Education Agency wishing to receive state funding for student enrollments in Work Based Learning (WBL) Capstone courses must ensure the student is provided with paid work experience. WBL Capstone course enrollments must maintain a formal Work Based Learning training plan on file at the location where the student is enrolled in the corresponding Work Based Learning course.

ENGLISH/LANGUAGE ARTS

INTRODUCTION

The State Board of Education requires **eight credits** in English/Language Arts for graduation from Indiana high schools. All courses should be based on *Indiana's Academic Standards for English/Language Arts* or the *Content Connectors for English/Language Arts*. A course that primarily emphasizes the completion of: (1) forms, (2) letter writing, (3) worksheets, and (4) skill-and-drill does not meet the English/ Language Arts graduation requirements. These courses must assist students in developing skills in all aspects of reading and language arts, especially the ability to think critically.

NOTE: Schools may decide locally whether students must take English 9-12. Indiana Administrative Code 6-7.1-5 requires 8 credits in ELA to be earned with a balance in literature, composition, and speech over four years. However, students should not be in elective courses until they have passed the End-of-Course Assessment or ISTEP+ English 10 in grade 10.

The goal of the study of *literature* is to provide students with frequent and continual opportunities to: (1) learn and apply essential skills in reading and writing in order to read proficiently; (2) read widely to build a better understanding of various types of texts, genres, and national and international cultures; (3) acquire new information to enable them to meet the needs of the workplace and society as a whole; and (4) make reading a lifelong pursuit. Literature courses must provide the skills necessary to respond to literature critically, reflectively, and imaginatively both in writing and speaking and to develop strategies for making independent critical analyses of literature. Literature courses include reading for pleasure and expose students to reading materials available in school media centers and public libraries.

The goal of *composition* is to provide students with frequent and continual opportunities to learn and apply essential writing skills, using a process that includes: (1) prewriting, (2) drafting, (3) revising, (4) editing, and (5) producing a final formal product. Strategies should include evaluating and responding to the writings of others. In addition to instruction in creating clear, coherent, and organized paragraphs and multi-paragraph essays for a variety of audiences and purposes, the courses teach strategies for collecting and transforming data for use in writing, as well as teach criteria to use in the evaluation and revision of various types of writing. Instruction in grammar, usage, and mechanics is integrated with writing instruction so that students develop a common language for editing and revising. All writing in its final publication form follows accepted conventions of language, style, mechanics, and format.

ENGLISH 9
(ENG 9)

1002

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
(ENG 9)

1002

English 9 Honors is an integrated English course based on Indiana's Academic Standards for English/Language Arts in Grade 9 is a study of language, literature, composition, and oral communication with a focus on exploring a wide-variety of genres and their elements. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance appropriate for Grade 9 in classic and contemporary literature balanced with nonfiction. Students write short stories, responses to literature, expository and persuasive compositions, research reports, business letters, and technical documents. Students deliver grade-appropriate oral presentations and access, analyze, and evaluate online information. In addition to English 9 content, English 9 Honors students will have an intensive study of poetry. The poetry unit will study a variety of structures, devices, and themes found in varying types of poems. Students will study classic poetic works, as well as creating original works using the study of the classic material as a model. Students will learn scansion, alliteration, assonance, rhyme, and figurative language including simile and metaphor. In addition to the English 9 content, English 9 Honors students will read four novels distinguishing the novel from other literary genres such as the short story, epic, biography, etc. Novels will be selected from the Indiana Reading List. Students will learn that the novel is: (1) narrative and fictional; and (2) that it has setting, conflict, climax, and resolution.

- Recommended Grade Level: Grade 9
- Recommended Prerequisites: None
- Credits: 2 credits, a two-semester course with 1 credit per semester Fulfills an English/Language Arts requirement for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

ENGLISH 10
(ENG 10)

1004

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 (ENG10)

1004

English 10 Honors is an integrated English course based on Indiana's Academic Standards for English/Language Arts in Grade 10 is a study of language, literature, composition, and oral communication with a focus on exploring universal themes 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 appropriate for Grade 10 in classic and contemporary literature balanced with nonfiction. Students write short stories, responses to literature, expository and persuasive compositions, research reports, business letters, and technical documents. Students deliver grade-appropriate oral presentations and access, analyze, and evaluate online information. In addition to the English 10 content, English 10 Honors/Academic students will read four novels further distinguishing the novel from other literary genres such as the short story, epic, biography, etc. Novels will be selected from the Indiana Reading List. Students will not only learn that the novel is: (1) narrative and fictional; and (2) that it has setting, conflict, climax, and resolution, but English 10 Academic students will begin to analyze the novel's intended audience, purpose, and historical setting. In addition to the English 10 content, English 10 Honors/Academic students will also be expected to demonstrate the successful mastering of grammar terminology and usage. Academic English 10 and above students will be held accountable for all grammar errors on all written assignments after a comprehensive study of grammar through lecture, worksheets, and writing.

- Recommended Grade Level: Grade 10
- Recommended Prerequisites: English 9 or teacher recommendation 22
- Credits: 2 credits, a two-semester course with 1 credit per semester Fulfills an English/Language Arts requirement for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.

ENGLISH 11 (ENG 11)

1006

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 Level: 11
- 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

1006

English 11 Honors is a study of language, literature, composition, and oral communication with a focus on exploring characterization across universal themes and 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 appropriate for Grade 11 in classic and contemporary literature balanced with nonfiction. Students write fictional narratives, short stories, responses to literature, reflective compositions, historical investigation reports, resumes, and technical documents incorporating visual information in the form of pictures, graphs, and tables. Students write and deliver grade-appropriate multimedia presentations and access, analyze, and evaluate online information. In addition to the English 11 content, English 11 Honors students will read four novels selected from the Indiana Reading List. Students will study the history of the novel as a genre. Early novels of episodic nature will be read with an emphasis on the continual change of the novel up to and including recent novels. In addition to the English 11 content, English 11 Honors students will study the history of Drama as a genre, will critique both playwrights and plays, and will practice dramatic reading while presenting plays within the classroom.

- Recommended Grade Level: Grade 11
- Recommended Prerequisites: English 9 and English 10 or teacher recommendation
- Credits: 2 credits, a two-semester course with 1 credit per semester • Fulfills an English/Language Arts requirement for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

ENGLISH 12 (ENG 12)

1008

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 AS A NEW LANGUAGE (ENL)

1012 or 2188

English as a New Language, an integrated English course incorporating both the *Indiana Academic Standards for English Language Arts* and the *WIDA English Language Development (ELD) Standards*, is the study of language, literature, composition and oral communication for Limited English Proficient (LEP) students. The purpose of the course is to achieve proficiency in

listening, speaking, reading, writing, and comprehension of Standard English. Students study English vocabulary used in fictional texts and content-area texts, speak and write English so that they can function within the regular school setting and an English-speaking society, and deliver oral presentations appropriate to their respective levels of English proficiency.

- Recommended Grade Level: The intent of the ENL course is to move students as successfully, smoothly, and rapidly as possible into the Core 40 English courses offered in grades 9-12.
- Recommended Prerequisites: English proficiency placement test results
- Credits: 2 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at advanced levels (up to a maximum of four credits).
- Fulfills an English Language Arts requirement for all diplomas
- **World Language credit (2188):** If ENL course work addresses *Indiana's Academic Standards for World Languages* and is taken concurrently with another English Language Arts course, up to four (4) credits accrued may count as World Language credits for all diplomas.

STUDENT MEDIA (STDNT MEDIA)

1086

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

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: Journalism, Mass Media, or teacher recommendation
- Credits: 1 semester course, 1 credit per semester, 8 credits maximum. The nature of this course allows for successive semesters of instruction at advanced levels. May be offered over three or four years by titling the course Beginning, Intermediate, or 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.

GENRES OF LITERATURE (GENRES LIT)

1036

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 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 Level: 11, 12
- 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

CRITICAL THINKING AND ARGUMENTATION

1074

(CRIT THINK)

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

- Recommended Grade Level: 11, 12
- 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 the 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: 9, 10, 11, 12
- Recommended Prerequisites: None
- Credits: 1 semester course, 1 credit per semester
- Fulfills an English/Language Arts requirement for all diplomas

CREATIVE WRITING

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 Level: 11, 12
- 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

EXPOSITORY WRITING (EXPOS WRIT)

1094

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

- Recommended Grade Level: 11, 12
- 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

LANGUAGE ARTS LAB (LANG LAB)

1010

Language Arts Lab is a **supplemental** course that provides students with individualized or small group instruction designed to support success in completing course work 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 Level: 9, 10, 11, 12
- 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

FINE ARTS

INTRODUCTION

In order to provide a quality education for every child in Indiana, it is important to provide for all aspects of human growth. The artistic, expressive, and cultural aspects of each child's intellectual, emotional, physical, and social development are vital components of this growth. Research involving the impact of arts education upon mental functions supports the convictions of many educators, parents, and business leaders that the fine arts are essential due to their ability to provide students with the means to think, feel, and understand the world around them in unique ways. Literacy in the arts strengthens a person's participation in society by enhancing problem solving and communication skills as well as fostering self-expression, aesthetic awareness, and multiple points of view. For these reasons, a curriculum in each of the fine arts should be available to all students so that they may become self-directed toward lifelong learning in the arts.

The purpose of each fine arts curriculum is to promote lifelong participation in the arts by developing skilled creators, performers, critics, listeners, and observers of the arts. Students can use the arts as a means of: (1) self-expression and communication, (2) development of critical thinking skills, (3) self-knowledge and understanding of the world around them, and, (4) increasing awareness of the artistic heritage of other cultures, as well as their own.

Students who are proficient in the fine arts grow in their ability to think and learn independently. Their view of the world expands as creative avenues to expression and understanding are developed. Ultimately, the entire community benefits through the creativity, vision, and empathy fostered in the fine arts.

In order for this to happen, students must be immersed in opportunities to learn about the arts, perform and create in one or more of the art forms, and learn to analyze and critique the arts. The goals for students in grades kindergarten through grade twelve (K-12) are to enable each student to do the following:

- Develop one's artistic skills;
- Become confident in one's abilities in the arts;
- Become a creative problem solver;
- Appreciate the value of the arts;
- Communicate through the arts;
- Communicate about the arts;
- Exhibit knowledge of the historical and cultural diversity of the arts; and
- Exhibit knowledge of criticism and aesthetics in the arts.

Music Course Titles

ADVANCED CHORUS (L) (ADV CHOR)

4188

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.

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: Beginning and Intermediate 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

ADVANCED CONCERT BAND (L) (ADV BAND)

4170

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 Level: 10, 11, 12
- 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

APPLIED MUSIC (L)
(APPL MUS)

4200

Applied Music is based on the Indiana Academic Standards for High School Choral or Instrumental Music. Applied Music offers high school students the opportunity to receive small group or private instruction designed to develop and refine performance skills. A variety of music methods and repertoire is utilized to refine students' abilities in performing, creating, and responding to music.

- Recommended Grade Level: 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 CHORUS (L)
(BEG CHOR)

4182

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.

- Recommended Grade Level: 10, 11, 12
- 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

BEGINNING CONCERT BAND (L)
(BEG BAND)

4160

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 Level: 9, 10, 11, 12
- 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

CHORAL CHAMBER ENSEMBLE (L)
(CHRL ENSEM)

4180

Choral Chamber Ensemble is based on the Indiana Academic Standards for High School Choral Music. Student musicianship and specific performance skills in this course are enhanced through specialized small group instruction. The activities expand the repertoire of a specific genre. Chamber ensemble classes provide instruction in creating, performing, listening to, and analyzing music in addition to focusing on specific subject matter. 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 Level: 10, 11, 12
- 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

JAZZ ENSEMBLE (L)
(JAZZ ENS)

4164

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

and or orchestra class offering at the discretion of the director.

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized.
- Counts as a Directed Elective or Elective for all diplomas
- Fulfills requirement for 1 of 2 Fine Arts credits for the Core 40 with Academic Honors Diploma if students are enrolled in another band or orchestra course

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
- 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 Level: 9, 10, 11, 12
- 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 requirement for 1 to 2 Fine Arts credits for Core 40 with Academic Honors Diploma
- Laboratory Course

Visual Arts Course Titles

4040 **CERAMICS (L)**
(*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 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

4082 **DIGITAL DESIGN (L)**
(*DIG DESIGN*)

Digital Design is a course based on the Indiana Academic Standards for Visual Art. Students in digital design engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works. They incorporate desktop publishing, multi-media, digitized imagery, computer animation, and web design. Students reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries, and studios, and identify art-related careers.

- 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

4060

DRAWING (L)
(DRAWING)

Drawing is a course based on the Indiana Academic Standards for Visual Art. Students in drawing engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works. Students create drawings utilizing processes such as sketching, rendering, contour, gesture, and perspective drawing and use a variety of media such as pencil, chalk, pastels, charcoal, and pen and ink. They reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries, and studios, and identify art-related careers.

- 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

4046

FIBER ARTS (L)
(FBR ARTS)

Fiber Arts is a course based on the Indiana Academic Standards for Visual Art. Students in fiber arts 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 fiber art works utilizing processes such as loom and off-loom construction, dyeing, coiling, and stitchery. 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 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

4002

INTRODUCTION TO THREE-DIMENSIONAL ART (L)
(3D ART)

Introduction to Three-Dimensional Art is a course based on the Indiana Academic Standards for

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

- 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

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

4064

PAINTING (L)
(PAINTING)

Painting is a course based on the Indiana Academic Standards for Visual Art. Students taking painting engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production that lead to the creation of portfolio quality works. Students create abstract and realistic paintings, using a variety of materials such as mixed media, watercolor, oil, and acrylics as well as techniques such as stippling, gouache, wash, and impasto. They reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries, and studios, and identify art-related careers.

- 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

4062

PHOTOGRAPHY (L)
(PHOTOGRPH)

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

- 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

HEALTH AND WELLNESS

HEALTH and WELLNESS EDUCATION

(HLTHandWELL)

3506

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.

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: 8th grade health education
- Credits: 1 semester course, 1 credit per semester, 1 credit maximum
- Fulfills the Health and Wellness requirement for all diploma types

MATHEMATICS

ALGEBRA I (ALG I)

2520

Algebra I formalizes and extends the mathematics students learned in the middle grades. Algebra I is made up of 6 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
- Counts as a Mathematics course for all diplomas
- Fulfills the Algebra I/Integrated Mathematics I requirement for all diplomas
- Students pursuing Core 40, Core 40 with Academics Honors, or Core 40 with Technical Honors diploma should receive credit for Algebra I by the end of Grade 9

ALGEBRA I LAB (formerly Algebra Enrichment) (ALG I LAB)

2516

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
- Counts as a Mathematics course for the General Diploma only or as an elective for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- **Algebra I Lab is designed as a support course for Algebra I. As such, a student taking Algebra I Lab must also be enrolled in Algebra I during the same academic year.**

ALGEBRA II
(ALG II)

2522

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
- Counts as a Mathematics course for all diplomas
- Fulfills the Algebra II/Integrated Mathematics III requirement for all diplomas

FINITE MATHEMATICS
(FINITE)

2530

Finite Mathematics is an umbrella of mathematical topics. 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 Level: 9, 10, 11, 12
- Recommended Prerequisites: Algebra II or Integrated Mathematics III or Analytical Algebra II
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum. Due to the level of rigor, it is recommended that Finite Mathematics be offered as a 2 semester, 2 credit course.
- Counts as a Mathematics course for all diplomas

GEOMETRY
(GEOM)

2532

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
- Counts as a Mathematics course for all diplomas
- Fulfills the Geometry/Integrated Mathematics II requirement for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

MATH 10
(MTH10)

2531

Math 10 is a new two-semester course designed to reinforce and elevate the Algebra I and 8th grade geometry knowledge and skills necessary for students to successfully complete high school mathematics courses beyond Algebra I and essentials for passing the state's graduation qualifying exam in mathematics. Enrollment will be contingent upon recommendation of the Algebra I or Integrated Math I teacher based on diagnostic results of performance in Algebra I and/or mathematics competency assessments. The standards for this course are aligned to the state standards that students need to master for success with the state's graduation qualifying exam in mathematics and the next level math courses. Emphasis is on a variety of instructional methods designed to meet each student's needs and delivered through competency-based units. Pre- and post-assessment data should be analyzed on a continuous basis to drive instructional design and delivery.

- Recommended Grade Level: 9, 10
- Recommended Prerequisites: Students who have attempted a complete year of Algebra I
- Credits: 2 semester course, 1 credit per semester
- Counts as a Mathematics course for the General Diploma only or as an elective for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

MATHEMATICS LAB
(MATH LAB)

2560

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 Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester, 8 credits maximum
- Counts as an elective 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
(PRECAL)

2564

Pre-Calculus extends the foundations of algebra and functions developed in previous courses to new functions, including exponential and logarithmic functions, and to higher-level sequences and series. The course provides students with the skills and understandings that are necessary for advanced manipulation of angles and measurement. Pre-Calculus is made up of five strands: Polar Coordinates and Complex Numbers; Functions; Quadratic, Polynomial, and Rational Equations and Functions; Exponential and Logarithmic Equations and Functions; and Parametric Equations. Students will also advance their understanding of imaginary numbers through an investigation of complex numbers and polar coordinates. The course is designed for students who expect math to be a major component of their future college and career experiences, and as such it is designed to provide students with strong foundations for calculus and other higher-level math courses. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisite: Algebra II and Geometry
- Credits: 1 semester course, 1 credit per semester
- Counts as a Mathematics course for all diplomas

PROBABILITY AND STATISTICS
(PROB/STAT)

2546

Probability and Statistics includes the concepts and skills needed to apply statistical techniques in the decision-making process. Probability and Statistics are made up of three strands: Data Analysis; Experimental Design; and Probability. Practical examples based on real experimental data are used throughout. Students plan and conduct experiments or surveys and analyze the resulting data. The use of graphing technology and computer programs is encouraged. 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 II
- Credits: 1 semester course, 1 credit per semester
- Counts as a Mathematics course for all diplomas

TRIGONOMETRY
(TRIG)

2566

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

- Recommended Grade Level: 9, 10, 11, 12
- Recommended Prerequisites: Algebra II and Geometry or Integrated Mathematics III
- Credits: 1 semester course, 1 credit per semester
- Student should not receive credit for both Trigonometry and Pre-Calculus/Trigonometry since they cover the same course content during one semester
- Counts as a Mathematics course for all diplomas

MULTIDISCIPLINARY

BASIC SKILLS DEVELOPMENT

0500

(BAS SKLS)

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

- 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

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 interest. Unlike a cooperative education program 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 Level: 11, 12
- Recommended Prerequisite: Preparing for College and Careers; Career Information and Exploration
- Credits: 1 semester course, 1-3 credits per semester, may be taken for multiple semesters
- This course may be taken for additional semesters to allow students to explore additional career areas.
- 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
- This course is exploratory in nature and, as such, does not qualify for reimbursement under the career- technical (vocational) funding formula.
- Incorporating Work based Learning (WBL) design principles into this course may satisfy the WBL component for Indiana's Graduation Pathways.

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
- Recommended Prerequisites: None
- Credits: 1 to 2 semester course, 1 credit per semester, 2 credits maximum
- Counts as an Elective for all diplomas
- Incorporating Service-Based Learning (SBL) design principles into this course may satisfy the SBL component for Indiana's Graduation Pathways.

PHYSICAL EDUCATION

INTRODUCTION TO PHYSICAL EDUCATION

Physical Education I and II, and Elective Physical Education are based on *Indiana's Academic Standards for Physical Education*. These courses identify what a student should know and be able to do as a result of a quality physical education program. Physical literacy is defined by SHAPE America a “*the ability to move with competence and confidence in a wide variety of physical activities in multiple environments that benefit the healthy development of the whole person.*” The goal of a physically educated student and physically literate student is to maintain appropriate levels of cardio-respiratory endurance, muscular strength and endurance, flexibility, and body composition, knowledge skills, and confidence necessary for a lifetime of healthful physical activity. Through a variety of instructional strategies, students practice skills that demonstrate that the physically literate individual. This includes demonstrating competency in a variety of motor skills and movement patterns; applying knowledge of concepts, principles, strategies and tactics related to movement and performance; demonstrating the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness; exhibiting responsible personal and social behavior that respects self and others; and recognizing the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction. Physical Education courses are designated as laboratory course and, as such, 25% of course time must be spent in activity.

Adapted physical education must be offered, as needed, in the least-restricted environment and must be based upon an individual assessment.

ELECTIVE PHYSICAL EDUCATION (L)

3560

(ELECT PE)

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 cardio-respiratory 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
- The nature of this course allows for successive semesters of instruction provided defined proficiencies and content standards are utilized.

- 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.

PHYSICAL EDUCATION I (L)
(PHYS ED)

3542

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)
(PHYS ED II)

3544

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-restricted environment and must be based upon an individual assessment.
- As a designated laboratory course, 25% of course time must be spent in activity.

SCIENCE

INTRODUCTION

Indiana’s Academic Standards for Science--2016 were adopted by the State Board of Education in April, 2016. The standards contain both content standards and process standards. The Science and Engineering Process Standards are the processes and skills that students are expected to learn and be able to do within the context of the science content. The separation of the process standards from the content standards is intentional; the separation of the standards explicitly shows that what students are doing while learning science is extremely important. The process standards reflect the way in which students are learning and doing science and are designed to work in tandem with the science content, resulting in robust instructional practice.

Rules of the State Board of Education for each diploma are as follows:

General	Core 40	Academic Honors	Technical Honors
Four credits in science: <ul style="list-style-type: none"> ● Two credits in Biology I ● Two additional credits At least one credit must be from a Physical Science or Earth and Space Science course.	Six credits in science: <ul style="list-style-type: none"> ● Two credits in Biology I ● Two credits in Chemistry I, or Physics I, or Integrated Chemistry-Physics ● Two additional credits in a Core 40 Science. 	The same course requirements as the Core 40 diploma, but students must earn a grade of “C” in order for a course to count towards this diploma. In addition, students must have a grade point average of “B” or above.	The same course requirements as the Core 40 diploma, but students must earn a grade of “C” in order for a course to count towards this diploma. In addition, students must have a grade point average of “B” or above.

ADVANCED SCIENCE, SPECIAL TOPICS (L)

3092

(ADV SCI ST)

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

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester, may be offered for successive semesters
- Counts as a science course for all diplomas

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 Level: 11, 12
- Recommended Prerequisites: Biology
- Credits: 1 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

BIOLOGY I (L)

3024

(BIO I)

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

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

CHEMISTRY I (L)

3064

(CHEM I)

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

- Recommended Grade Level: 10, 11, 12
- Recommended Prerequisite: Algebra II (can be taken concurrently)
- 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

EARTH AND SPACE SCIENCE I (L)
(EAS SCI I)

3044

Earth and Space Science I is a course focused on the following core topics: universe; solar system; Earth cycles and systems; atmosphere and hydrosphere; solid Earth; Earth processes. Students analyze and describe earth's interconnected systems and examine how earth's materials, landforms, and continents are modified across geological time. Instruction should focus on developing student understanding that scientific knowledge is gained from observation of natural phenomena and experimentation, by designing and conducting investigations guided by theory, and by evaluating and communicating the results of those investigations according to accepted procedures.

- Recommended Grade Level: 9, 10, 11, 12
- Credits: 2 semester course, 1 credit per semester
- Counts as an Elective for all diplomas
- Fulfills a science course requirement for all diplomas

ENVIRONMENTAL SCIENCE (L)
(ENVSCI)

3010

(online only)

Environmental Science is an interdisciplinary course that integrates biology, earth science, chemistry, and other disciplines. Students enrolled in this course conduct in-depth scientific studies of environmental systems, flow of matter and energy, natural disasters, environmental policies, biodiversity, population, pollution, and natural and anthropogenic resource cycles. Students formulate, design, and carry out laboratory and field investigations as an essential course component. Students completing Environmental Science, acquire the essential tools for understanding the complexities of national and global environmental systems.

- Recommended Grade Level: 11, 12
- 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

INTEGRATED CHEMISTRY-PHYSICS (L)
(ICP)

3108

Integrated Chemistry-Physics is a course focused on the following core topics: constant velocity; uniform acceleration; Newton's Laws of motion (one dimension); energy; particle theory of matter; describing substances; representing chemical change; electricity and magnetism; waves; nuclear energy. Instruction should focus on developing student understanding that scientific knowledge is gained from observation of natural phenomena and experimentation by designing and conducting investigations guided by theory and by evaluating and communicating the results of those investigations according to accepted procedures.

- Recommended Grade Level: 9
- Recommended Prerequisite: Algebra I (may be taken concurrently with this course)
- Credits: A two credit course
- Counts as an Elective for all diplomas
- Fulfills a science (physical) course requirement for all diplomas

PHYSICS I (L)
(PHYS I)

3084

Physics I is a course focused on the following core topics: constant velocity; constant acceleration; forces; energy; linear momentum in one dimension; simple harmonic oscillating systems; mechanical waves and sound; simple circuit analysis. Instruction should focus on developing student understanding that scientific knowledge is gained from observation of natural phenomena and experimentation, by designing and conducting investigations guided by theory, and by evaluating and communicating the results of those investigations according to accepted procedures.

- Recommended Grade Level: 9, 10, 11
- Recommended Prerequisites: Algebra I or 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

SCIENCE RESEARCH, INDEPENDENT STUDY (L)
(SCIRSRCH IS)

3008

Science Research, Independent Study is a course that provides students with unique opportunities for independent, in-depth study of one or more specific scientific problems. Students develop a familiarity with the laboratory procedures used in a given educational, research, or industrial setting or a variety of such settings. Students enrolled in this course will complete a science fair project to be exhibited at a regional science fair and/or state science symposium, an end-of-course project, such as a scientific research paper, or some other suitable presentation of their findings.

- Recommended Grade Level: 11, 12
- Recommended Prerequisite: Two credits in Core 40 science coursework (this course may be taken concurrently with a Core 40 science course)
- Credits: 2 semester course, 1 credit per semester
- Counts as a science course for all diplomas
- Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

SOCIAL STUDIES

CITIZENSHIP AND CIVICS

(CIVICS)

1508

Citizenship and Civics is an overview of citizenship roles and responsibilities designed to help students become independent thinkers and conscientious citizens. This course deals with political trends and behavior which citizens consider to be relevant to the most pressing issues of the day. The course provides students experiences that will develop attitudes of citizenship within a democratic society. Topics include: (1) the policymaking process, (2) public participation in policymaking, (3) citizenship rights and responsibilities in a changing society, and (4) the relationship between modern society and government. Study of the local government should be a component of this course.

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

CURRENT PROBLEMS, ISSUES, AND EVENTS

(CPIE)

1512

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

- Recommended Grade Level: none
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester. Course may be repeated for credit if the content of the course changes.
- Counts as an Elective for all diplomas

ECONOMICS
(ECON)

1514

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

ETHNIC STUDIES
(ETH STUDIES)

1516

(may be offered online)

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
(IN STUDIES)

1518

Indiana Studies is an integrated course that compares and contrasts state and national developments in the areas of politics, economics, history, and culture. The course uses Indiana history as a basis for understanding current policies, practices, and state legislative procedures. It also includes the study of state and national constitutions from a historical perspective and as a current foundation of government. Examination of individual leaders and their roles in a democratic society will be included and student 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

INTRODUCTION TO SOCIAL SCIENCE

1522

(INTRO SS)

Introduction to Social Science develops an understanding of the nature of the social sciences and presents reasons for studying them. The course involves consideration of the social sciences such as: (1) the study of humanity; (2) the reasons for separate fields or disciplines; (3) the objectives, materials, and methods of each discipline; and (4) the difficulties encountered by social scientists in applying scientific method to the study of human life. Content may include group and individual behavior, education, social systems, and the role of the social studies.

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

PSYCHOLOGY
(PSYCH)

1532

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.

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

SOCIOLOGY
(SOCIOLOGY)

1534

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

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

TOPICS IN HISTORY
(TOP HIST)

1538

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

- Recommended Grade Level: 11, 12
- Recommended Prerequisites: United States History or History and World Civilizations
- Credits: 1 semester course, 1 credit per semester. This course may be repeated if the material in the course is different from one semester to the next. Topics in History can address different topics in World History or U.S. History.
- Counts as an Elective all diplomas
- Incorporating Project-Based Learning (PBL) design principles into this course may satisfy the PBL component for Indiana's Graduation Pathways.

UNITED STATES GOVERNMENT
(US GOVT)

1540

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 Level: 11, 12
- Recommended Prerequisites: none
- Credits: 1 semester course, 1 credit per semester
- Fulfills the Government requirement for all diplomas

UNITED STATES HISTORY
(US HIST)

1542

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

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

WORLD LANGUAGES

SPANISH I (SPAN I)

2120

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

SPANISH II (SPAN II)

2122

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

2124

SPANISH III
(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

2126

SPANISH IV
(SPAN IV)

Spanish IV, a course based on *Indiana's Academic Standards for World Languages*, provides a context for integration of the continued development of language skills and cultural understanding with other content areas and the community beyond the classroom. The skill sets that apply to the exchange of written and oral information are expanded through emphasis on practicing speaking and listening strategies that facilitate communication, such as the use of circumlocution, guessing meaning in familiar and unfamiliar contexts, and using elements of word formation to expand vocabulary and derive meaning. Additionally, students will continue to develop understanding of Spanish-speaking culture through explaining factors that influence the practices, products, and perspectives of the target culture; reflecting on cultural practices of the target culture; and comparing systems of the target culture and the student's own culture. This course further emphasizes making connections across content areas through the design of activities and materials that integrate the target language and culture with concepts and skills from other content areas. The use and influence of the Spanish language and culture in the community beyond the classroom is explored through the identification and evaluation of resources intended for native Spanish speakers.

- Recommended Grade Level: 9, 10, 11, 12
- Required Prerequisites: Spanish I, II and III
- 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 V
(SPAN V)

Spanish V, a course based on *Indiana's Academic Standards for World Languages*, provides opportunities for students to interact and exchange information in culturally and socially authentic and/or simulated situations to demonstrate integration of language skills with understanding of Spanish-speaking culture. This course emphasizes the use of appropriate formats, varied vocabulary and complex language structures within student communication, both oral and written, as well as the opportunity to produce and present creative material using the language. Additionally, students will continue to develop understanding of Spanish-speaking culture through investigating the origin and impact of significant events and contributions unique to the target culture, comparing and contrasting elements that shape cultural identity in the target culture and the student's own culture, and explaining how the target language and culture have impacted other communities. This course further emphasizes the integration of concepts and skills from other content areas with the target language and cultural understanding, as well as the exploration of community resources intended for native Spanish speakers.

- Recommended Grade Level: 9, 10, 11, 12
- Required Prerequisites: Spanish I, II, III and IV
- 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

END OF DOCUMENT