

Course Description Guide

Includes complete descriptions

Rochester High School
Classes of 2016, 2017, 2018

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Adam Strasser, Principal

Chris Keisling, Assistant Principal

Wendy Ternieden, Counselor

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Course and Credit Requirements

English/ Language Arts	8 credits Including a balance of literature, composition and speech.
Mathematics	6 credits (in grades 9-12) 2 credits: Algebra I 2 credits: Geometry 2 credits: Algebra II <i>Or complete Integrated Math I, II, and III for 6 credits. Students must take a math or quantitative reasoning course each year in high school</i>
Science	6 credits 2 credits: Biology I 2 credits: Chemistry I or Physics I or Integrated Chemistry-Physics 2 credits: any Core 40 science course
Social Studies	6 credits 2 credits: U.S. History 1 credit: U.S. Government 1 credit: Economics 2 credits: World History/Civilization or Geography/History of the World
Directed Electives	5 credits World Languages Fine Arts Career and Technical Education
Physical Education	2 credits
Health and Wellness	1 credit
Electives*	6 credits <i>(College and Career Pathway courses recommended)</i>
40 Total State Credits Required	

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

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

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

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

Schools may have additional local graduation requirements that apply to all students

* Specifies the number of electives required by the state. High school schedules provide time for Many more electives during the high school years. All students are strongly encouraged to complete a College and Career Pathway (selecting electives in a deliberate manner) to take full advantage of career and college exploration and preparation opportunities.

New Tech Certification

In order to receive the NT diploma, a senior must complete these four senior activities:

Summary Requirement
Final forms will be written into rubrics.

Coordinator

1. Community Service	20 documented hours as a junior/senior	Cristina Velazquez Wendy Ternieden
2. College Credits	6 hours minimum Includes 6 hours from ACP, BSU, PU, IPFW, Ivy Tech, and hours for courses that may not be activated until college enrollment.	Kristin Horn Cristina Velazquez Wendy Ternieden
3. Professional Portfolio	Personal Statement of goals Data from tests and surveys Examples of best work Resume, Autobiography, and letters of recommendation Skills learned and progress toward goals More powerful if connected to New Tech graduation requirements	Adam Strasser with Language Arts teachers

One of the remaining options must be completed to finish the NT diploma requirement.

A. Internship	70 hours at site plus 15 hours classroom for credit.	Cristina Velazquez Wendy Ternieden
B. Senior Project	Must be relevant to individual student goals - whenever possible connect to Internships Project may be individual or group. Senior Project must be presented to an evaluation panel.	Adam Strasser and RHS Cabinet Teacher volunteers

Any Senior can choose to do any of these options but must do 1,2 and 3 and either A or B to receive the New Certification on their diploma. All seniors seeking the New Tech designation will be eligible to have an independent resource period for completing the activities.

END-OF-COURSE ASSESSMENTS

An ECA (End-of-Course Assessment) is an online exam that assesses students in the Indiana Academic Standards for that high school course. All Indiana students will be given an ECA at the completion of the following courses: Algebra I, English 10, and Biology I.

The Algebra I and English 10 ECAs make up the high school ISTEP+ assessment system. Students **MUST** pass End-of-Course Assessments in Algebra I and English 10 in order to graduate from an Indiana high school. Students who do not pass the Algebra I and/or English 10 ISTEP+ ECAs will receive remediation in one/both areas and will have the opportunity to retake those ECAs at least four more times throughout high school.

N.C.A.A. ELIGIBILITY

Any student athlete, who may compete in Division I or Division II athletics in college, needs to be aware of the rules on eligibility established by the N.C.A.A. If you have a question about these requirements, see Mr. Helt or the guidance office. Students who have completed their junior year are responsible for registering at www.eligibilitycenter.org.

PASSING COURSES

It is very important for our students to remain on track for graduation. We have many exciting opportunities, current and future, for our students that we want them to pursue. If students do not pass the required courses for graduation, they will have to retake the course(s) in order to graduate. This may limit elective opportunities as upperclassmen.

POSTSECONDARY ENROLLMENT PROGRAM

Credit earned at any *accredited* public or private college or university *located in Indiana* that grants a baccalaureate or associate degree may count at RHS. Generally any student in *grade 11* or *grade 12* may enroll either full-time or part-time in a college or university program and earn credits toward graduation from high school as well as credits in the college program if 1) progress toward graduation is not delayed, 2) the school could not offer the course, and 3) the course is a course for which credit can be given. Local decisions can be appealed. A student below grade 11 may also qualify, if the governing body of the School Corporation has established a supplemental postsecondary program in accordance with 511 IAC 6-10-4. The courses are determined by the local governing body of each school corporation. Generally, one high school credit will be given for an approved 3-hour college class. *Students should not enroll in a college or university class for high school credit until authorized to do so by RHS. Students must request the class credit one semester in advance of taking the class. Contact the guidance office for more information.*

Students who qualify for the Free and Reduced Lunch Program also qualify for free tuition for dual-credit classes. Some fees may apply.

MAKING GOOD DECISIONS ABOUT COURSE SELECTIONS

Before completing the Four Year Plan (last page of this booklet), students and parents need to consider future plans.

Students with plans of attending college or trade schools should plan on taking the PSAT since National Merit Scholarships are achieved by high PSAT scores from junior year testing. The SAT or ACT should be taken at least once (end of junior year) or twice (again during the senior year) to establish scores satisfactory for college admissions and financial aid. Colleges use SAT and ACT scores and their component scores (verbal or math) to determine the student's probable success. To raise SAT and ACT scores, students should plan on taking 4 years of English and four years of mathematics. Four years of foreign language is also helpful in achieving higher verbal scores. A student well prepared in academics, with high class rank, and good SAT and/or ACT scores will probably be admitted to most colleges and may receive some financial help.

Rank in class is computed upon the numerical grade point averages figured on semester grades. For example, the student with the highest accumulative grade point average will be ranked number 1 in the class. The semester grades of all courses are included except Driver Education and pass/fail classes. When computing GPA's (grade point averages), most colleges specify that students must rank in the upper one-half, one-fourth, or one-tenth of the class for admission and/or scholarships. This and other important college information, as well as career-related information, will be available to all high school students through career programs available in the Guidance Center.

G.P.A. and class rank are important for college admission but parents and students should know that colleges are changing their admission standards and are asking two questions. (1) Did the student take challenging classes or did the student take easy classes to create a high G.P.A.? (2) Did the student take the senior year "off" by not taking the courses that would best prepare a student for college? College admissions have become so competitive that students must meet all admission requirements by taking challenging classes all four years of high school.

16 Indiana Career Clusters

Career Clusters provide a way for schools to organize instruction and student experiences around sixteen broad categories that encompass virtually all occupations from entry through professional levels. The sixteen clusters are:

- Agriculture, Food & Natural Resources
- Architecture & Construction
- Arts, A/V Technology & Communications
- Business, Management & Administration
- Education & Training
- Finance
- Government & Public Administration
- Health Science
- Hospitality & Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections & Security
- Manufacturing
- Marketing, Sales & Service
- Science, Technology, engineering & Mathematics
- Transportation, Distribution, & Logistics

INTEGRATED COURSES

The path of study at Rochester Community Schools includes courses which integrate two subject areas through a series of collaborative projects. These courses emphasize mastery of the core curriculum skills as outlined by the Indiana State Standards for each of the combined courses. Generally, Global Perspectives is completed during the freshman year, sophomores take Digital Communications, and American Studies is taken as a junior. Scientific Studies may also be taken during the junior year.

Global Perspectives

<u>DOE Code</u>	<u>Course Title</u>	<u>Grade Level</u>	<u>Credit</u>
1002	English 9	9	2
1570	Geography & History of the World	9	2

Global Perspectives is a 9th grade thematic course combining English 9 and Geography and History of the World. It is taught as a two-hour block with two teachers.

Digital Communications

<u>DOE Code</u>	<u>Course Title</u>	<u>Grade Level</u>	<u>Credit</u>
1004	English 10	10	2
5232	Interactive Media	10	2

Digital Communications is a 10th grade thematic course combining English 10 and Interactive Media. It is taught as a two-hour block with two teachers.

American Studies

<u>DOE Code</u>	<u>Course Title</u>	<u>Grade Level</u>	<u>Credit</u>
1006	English 11	11	2
1542	United States History	11	2

American Studies is an 11th grade thematic course combining English 11 and United States History. It is taught as a two-hour block with two teachers.

AGRICULTURE

The following courses are offered for study within the agricultural education department at Rochester High School. All courses are year long unless otherwise noted.

Course Title	15-16	16-17	17-18
Advanced Life Sciences: Animals - <i>Purdue ANSC 10200</i>		X	
Agribusiness Management (fall)	X	X	X
Ag Power, Structure and Technology			
Ag Construction (fall)	X	X	X
Welding (spring) - <i>Ivy Tech INDT 114</i>	X	X	X
Animal Science		X	
Fundamentals of Agriculture Science and Business	X	X	X
Horticulture Science – <i>Ivy Tech AGRI 116</i>	X	X	X
Landscape Management (spring)	X		X
Natural Resource Management		X	
Plant and Soil Science	X		X
Supervised Agricultural Experience Program (summer)	X	X	X

Agricultural Education Course Descriptions

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended Grade Level</u>	<u>Credit</u>
5070	Advanced Life Science: Animals (C40 and AHD)	11 - 12	2
5002	Agribusiness Management	10 - 12	2
5088	Agricultural Power, Structure and Technology	11 - 12	1
5008	Animal Science	10 - 12	1
5056	Intro to Ag Food and Natural Resources	9 - 12	2
5132	Horticulture Science	10 - 12	3
5136	Landscape Management I	10 - 12	2
5180	Natural Resources	10 - 12	2
5170	Plant and Soil Science	10 - 12	2
5228	Supervised Agricultural Experience Program (summer)	10 - 12	1

The Agriculture Education courses can be utilized to fulfill elective requirements for Core 40 with Academic Honors and Core 40 with Technical Honors diplomas. In determining which classes are best suited, students must determine their interest areas and then select the courses that apply. The instructor is available to work with students in helping them select the courses that would best fit their plan of study. These courses include:

Intro to Agriculture Food and Natural Resources - This is a two semester course that 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.

Prerequisites: None

2 semesters, 2 credits

Agribusiness Management – This course provides foundational concepts in agricultural business. It is a two semester course that 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. This course is aligned with postsecondary courses for Dual Credit. **Qualifies as a Quantitative Reasoning course.**

Prerequisite: None

2 semesters, 2 credits

Animal Science - This course is a two semester program that provides students with an overview of the field of animal science. Students participate in a large variety of activities and laboratory work including real and simulated animal science experiences and projects. 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.

Prerequisites: None

2 semesters, 2 credits

Horticultural Science (Ivy Tech AGRI 116) - This is a yearlong course designed to give students a background in the field of horticulture and its many career opportunities. It addresses the biology and technology involved in the production, processing, and marketing of horticultural plants and products. Topics covered include: reproduction and propagation of plants, plant growth, growth media, hydroponics, floriculture and floral design, management practices for field and greenhouse production, interior plantscapes, marketing concepts, production of herbaceous, woody, and nursery stock, fruit, nut, and vegetable production, integrated pest management and employability skills. Students participate in a variety of activities including extensive laboratory work usually in a school greenhouse. This may be taken as a dual credit course through Ivy Tech.

Prerequisite: None

2 semesters, 2 credits

Landscape Management I - This two semester course provides the student with an overview of the many career opportunities in the diverse field of landscape management. Students are introduced to the procedures used in the planning and design of a landscape using current technology practices, the principles and procedures of landscape construction, the determination of maintenance schedules, communications and management skills necessary in landscape operations and the care and use of equipment utilized by landscapers. Students will also participate in leadership development, supervised agricultural experience and career exploration activities in the area of landscape management. Upon completion of the program, students have

the opportunity to become Indiana Landscape Industry Certified through a state approved program. This course is aligned with postsecondary courses for Dual Credit. **Qualifies as a Quantitative Reasoning course.**

Prerequisite: None

2 semesters, 2 credits

Natural Resources - Natural Resource Management is a two semester course that provides students with a foundation in natural resources. Hands-on learning activities in addition to leadership development, supervised agricultural experience and career exploration encourage students to investigate areas of environmental concern. Students are introduced to the following areas of natural resources: soils, the water cycle, air quality, outdoor recreation, forestry, rangelands, wetlands, animal wildlife and safety. This course is aligned with postsecondary courses for Dual Credit

Prerequisites: None

2 semesters, 2 credits

Plant and Soil Science - This is a yearlong course that provides students with opportunities to participate in a variety of activities including laboratory work. Topics covered include: the taxonomy of plants, the various plant components and their functions, plant growth, plant reproduction and propagation, photosynthesis and respiration, environmental factors affecting plant growth, integrated pest management plants and their management, 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, grain and forage quality, cropping systems, precision agriculture, principles and benefits of global positioning systems and new technologies, harvesting, and career opportunities in the field of plant and soil science.

Prerequisite: None

2 semesters, 2 credits

Supervised Agricultural Experience - This class offers students a unique opportunity in many areas of career development. The program is designed to provide students the opportunity to gain experience in agricultural and/or other areas of business and industry. Students work closely with the instructor, parents, and employers to get the most out of their personal program. If students cannot arrange this class within their schedule, an independent study program may be arranged.

Prerequisite: None

1 semester, 1 credit

Agriculture Construction - This is a semester long course intended to develop an understanding of the basic principles of construction. Students will learn how to design and construct various agricultural structures. Additional topics include electricity, concrete and masonry, and painting. Students are introduced to career opportunities in agricultural mechanization and related industries.

Prerequisites: None

1 semester, 1 credit

Welding (Ivy Tech INDT 114) - This is a one-semester course that can be taken twice for a total of two credits. The class is designed to support both beginning and advanced welders. Students will develop their proficiency in Shielded Metal Arc Welding, Gas Metal Arc Welding, and Gas Tungston Arc Welding. They will also learn to operate the Oxy-acetylene torch and the Plasma Arc Cutter. In addition, they will gain welding experience with different metals, including: aluminum, low carbon steel, and stainless steel. This course provides an excellent opportunity for

students to gain a highly marketable skill for today's industry.

Prerequisites: None

1 semester, 1 credit

Agricultural Sciences

The following three Agricultural Science Courses will count for high school science credit throughout the state of Indiana. They will satisfy two of the six required science credits. Students must complete an entire year in any one of the courses to achieve science credit.

Advanced Life Science: Animals (Purdue ANSC 10200) is a standards-based, interdisciplinary science course that integrates biology, chemistry, and microbiology in an agricultural context. Students enrolled in this course formulate, design, and carry out animal-based laboratory and field investigations as an essential course component. Students investigate key concepts that enable them to understand animal growth, development and physiology as it pertains to agricultural science. This course stresses the unifying themes of both biology and chemistry as students work with concepts associated with animal taxonomy, life at the cellular level, organ systems, genetics, evolution, ecology, and historical and current issues in animal agriculture. Students completing this course will be able to apply the principles of scientific inquiry to solve problems related to biology and chemistry in highly advanced agricultural applications of animal development.

The Advanced Life Science: Animals course fulfills a Core 40 Life Science requirement for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas or counts as an Elective for any diploma.

To apply for college credit through the Purdue Advanced Life Science program a student must complete one year of biology and one year of chemistry with a minimum of a "C", or integrated chemistry/physics with a minimum of a "C". A student must have a minimum GPA of 2.5 on a 4.0 scale (6.4 on a 12.0 scale – Class of 2015). **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Biology I and Chemistry 1 or
Integrated Chemistry/Physics

2 semesters, 2 credits

FAMILY AND CONSUMER SCIENCE

All courses are open to both boys and girls and are one semester in length allowing the student to earn one credit per semester.

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended Grade Level</u>	<u>Credit</u>
5342	Nutrition and Wellness (2016-17)	9-12	1
5340	Advanced Nutrition and Foods(2015-16)	10-12	1
5362	Child Development and Parenting (2016-17)	9-12	1
5360	Advanced Child Development(2015-16)	10-12	1
5364	Interpersonal Relationships	9-12	1
5350	Intro to Housing and Interior Design (2015-16)	10-12	1
5380	Intro to Fashion and Textiles (2016-17)	9-12	1
4540	Personal Financial Responsibility	9-12	1

COURSE DESCRIPTIONS

Nutrition and Wellness -- This course will focus on the impact of daily nutrition and wellness practices on long-term health and wellness. The physical, social and psychological aspects of healthy nutrition and wellness choices will be explored. Other areas of study include: wellness and fitness; selection and preparation of nutritious meals and snacks based on USDA Dietary Guidelines including the Food Guide Pyramid; safety, sanitation and food storage issues. Laboratory experiences which emphasize both nutrition and wellness practices are required components of this course. **THIS COURSE WILL BE LIMITED TO 18 STUDENTS.**

Prerequisites: Grade 9-12 1 semester, 1 credit

Advanced Nutrition and Wellness -- Advanced Nutrition and Foods is a sequential course that addresses more complex concepts in nutrition and foods. Topics include: nutrition and wellness for individuals and families across the life span; community and world food concerns: impacts of technology on nutrition, foods and related tools and equipment; management of food-related resources. Laboratory experiences, which emphasize advanced applications, are required. **THIS COURSE WILL BE LIMITED TO 18 STUDENTS.**

Prerequisites: Nutrition and Wellness, with a “B-” average 1 semester, 1 credit
 Grades 10-12/Pass with a “C” equivalent measurement test

Child Development -- This course will focus on the changing needs of children and how we as caregivers can support and promote optimal growth and development in children. Topics include prenatal growth, physical, emotional, social and intellectual development of the young child. As a part of this course students will participate in a simulation of infant care. Students **WILL** be responsible for the care of “Baby Think It Over”. The length of time each student has the baby will be determined by the class. Students will deal with financial and physical needs of the infant as part of the simulation. **THOSE WISHING NOT TO PARTICIPATE IN THIS SIMULATION SHOULD NOT TAKE THIS COURSE.**

Prerequisites: Grades 9-12 1 semester, 1 credit

Advanced Child Development -- Advanced Child Development is a sequential course that addresses more complex issues of child development and early childhood education with emphasis on guiding physical, social, emotional, intellectual, and moral development throughout childhood, including school age children. Topics may include positive parenting, developmentally appropriate guidance, brain/learning research and learning activities.

Prerequisites: Child Development and Parenting, 1 semester, 1 credit
with a “B” average, Grades 10-12

Interpersonal Relationships -- Interpersonal Relationships addresses the skill, attitudes and behaviors that people will need to develop caring and respectful relationships within the family, community, school and the workplace. Topics, which may be addressed, include components of healthy relationships, roles and responsibilities, and functions and expectations of various relationships. Emphasis will be stressed in the areas of communication, teamwork, goal setting, decision-making, stress management and the negative impact of dating violence and abuse.

Prerequisites: Grades 9-12 1 semester, 1 credit

Intro to Housing and Interior Design – This course addresses selecting and planning living environments to meet the needs and wants of individuals and families throughout the life cycle. Topics include: evaluation of housing styles, locations, zone restrictions, housing to meet special needs: elements and principles of design related to interiors: housing and architecture blueprinting and floor planning skills; creating functional, safe and aesthetic spaces. The historical aspects and the contemporary trends in housing, interiors, furniture and appliances will be addressed.

Prerequisites: Grades 10-12 1 semester, 1 credit

Intro to Fashion and Textiles – This course addresses the knowledge and skills related to design, production, acquisition and distribution in the textiles and fashion arenas. Topics include: textile principles and applications; social, psychological, cultural and environmental aspect of clothing and textiles selection; clothing and textile products for people with special needs; critical thinking applied to consumer options for fashion, textiles and related equipment and tools. Students will develop skill in care and maintenance of textile products, equipment and tools. Students and instructor will determine projects to be made and completed for this course. **Students will be required to provide a shoebox size container for their supplies.**

Prerequisites: Grades 9-12 1 semester, 1 credit

Personal Financial Responsibility – This course 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.

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Prerequisites: Grades 9-12 1 semester, 1 credit

FINE ARTS

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended</u>	
		<u>Grade Level</u>	<u>Credit</u>
4000	Intro to Two-Dimensional Art (2015-2016)	9-12	1
4002	Intro to Three-Dimensional Art (2015-2016)	9-12	1
4040	Ceramics (2016-2017)	11-12	1
4060	Drawing (2015-2016)	10-12	2
4064	Painting (2015-2016)	11-12	1
4044	Sculpture (2017-2018)	10-12	1
4086	Visual Communication (2015-2016)	10-12	1
4242	Theater Arts I (fall)	10-12	1
4240	Advanced Theater Arts (spring)	10-12	1
4160	Beginning/Intermediate/Advanced Concert Band	9-12	1
4186	Intermediate Chorus	10-12	1
4206	Music History and Appreciation	9-12	1
4188	Advanced Chorus (Manitous)	9-12	2
4188	Advanced Chorus Women's Chorus	9-12	2
1086	Student Publications Yearbook	10-12	2

COURSE DESCRIPTIONS

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, sculpture, 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. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. Fulfills requirement for 1 of 2 Fine Arts credits for Core 40 with Academic Honors diploma.

Prerequisites: Intro to Two & Three Dimensional Art 1 semester, 1 credit

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. **Students will work from their own photos or draw from life (still life) to create original works for their portfolio.** They reflect upon and refine their work; 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. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. Fulfills requirement for Fine Arts credits for Core 40 with Academic Honors diploma

Prerequisite: Intro to Two-Dimensional Art

1 or 2 semesters, 1 or 2 credits

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. Fulfills requirement for 1 of 2 Fine Arts credits for Core 40 with Academic Honors diploma.

Prerequisite: None

1 semester, 1 credit

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. Fulfills requirement for 1 of 2 Fine Arts credits for Core 40 with Academic Honors diploma

Prerequisites: Intro to Two-Dimensional Art

1 semester, 1 credit

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, glazing, wash, and impasto. **To create original works of art, students will paint from their own photos or work from still life. Painting students will also select a painter from the past to research and present to their peers.** 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. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. Fulfills requirement for 1 of 2 Fine Arts credits for Core 40 with Academic Honors diploma

Prerequisites: Intro to Two-Dimensional Art

1 semester, 1 credit

Sculpture is a course based on the Indiana Academic Standards for Visual Art. Students in sculpture engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production. Using materials such as plaster, clay, metal, paper, wax, and plastic, students create portfolio quality works. Students at this level produce works for their portfolios that demonstrate a sincere desire to explore a variety of ideas and problems. They create realistic and abstract sculptures utilizing subtractive and additive processes of carving, modeling,

construction, and assembling. They reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries, and studios, and identify art-related careers.

Prerequisites: Intro to Two & Three Dimensional Art

1 semester, 1 credit

Visual Communication is a course based on the Indiana Academic Standards for Visual Art. Students in visual communication engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works. They create print media utilizing graphic design, typography, illustration, and image creation with digital tools and computer technology. Students reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries, and studios, and identify art-related careers.

Prerequisites: Introduction to Two-Dimensional Art

1 semester, 1 credit

Theatre Arts I is based on the Indiana Academic Standards for Theatre. Students enrolled in Theatre Arts read and analyze plays, create scripts and theatre pieces, conceive scenic designs, and develop acting skills. These activities incorporate elements of theatre history, culture, analysis, response, creative process, and integrated studies. Additionally, students explore career opportunities in the theatre, attend and critique theatrical productions, and recognize the responsibilities and the importance of individual theatre patrons in their community. (Fine Arts credit)

Prerequisites: English 9, Teacher Selection

1 semester, 1 credit

Advanced Theatre Arts is based on the Indiana Academic Standards for Theatre. Students enrolled in Advanced Theatre Arts read and analyze plays and apply criteria to make informed judgments. They draw on events and experiences to create scripted monologues and scenes, create scenic designs for existing plays, and build characters through observation, improvisation and script analysis. These activities should incorporate elements of theatre history, culture, analysis, response, creative process, and integrated studies. Additionally, students explore careers in theatre arts and begin to develop a portfolio of their work. They also attend and critique theatre productions and identify ways to support the theatre in their community. (Fine Arts credit)

Prerequisites: Theatre Arts I

1 semester, 1 credit

Beginning/Intermediate/Advanced Concert Band – These are Core 40 and AHD courses. Students taking the courses are provided with a balanced comprehensive study of music through the concert band, which develops skills in the psychomotor, cognitive, and affective domains. Instruction is designed to enable students to connect, examine, imagine, define, try, extend, refine, and integrate music study into other subject areas. Ensemble and solo activities are designed to develop elements of musicianship including, but not limited to: (1) tone production, (2) technical skills, (3) intonation, (4) music reading skills, (5) listening skills, (6) analyzing music, and (7) studying historically significant styles of literature. Experiences include, but are not limited to, improvising, conducting, playing by ear, and sight-reading. Students are given opportunities to develop the ability to

understand and convey the composer's intent in order to connect the performer with the audience.

In the fall the band performs and cheers at Rochester home football games. In the winter the band performs pep music for home basketball games. Concert band selections are also performed at different times throughout the year for concerts, contests and other performances of the RHS band. The RHS Marching Zebras perform for parades and functions at various times throughout the school year. Students are also highly encouraged to participate in the state solo and ensemble contest held in the months of January or February each year. T-shirts are normally purchased by students each year for Pep Band, and newcomers to Band are also required to have designated shoes for Marching Band. Attendance at performances outside of regular school hours is required. During these performances the band director will be measuring the abilities of band members, as individuals, and the band as a whole. These performances can be likened to an examination in a regular classroom. It naturally follows that failure to perform at these "exams" would result in less than perfect grades. Being present for performances is a **major** part of meeting class requirements. No final exam is given.

Band requirements are:

- (1) knowledge of various major scales and arpeggios
- (2) knowledge of cadences and rudiments
- (3) playing tests and/or written exams
- (4) a positive "team" attitude for each band member
- (5) a desire to improve
- (6) service to Band through fundraising, donation, or work

Prerequisites: Admission or readmission to High School Band will be on an **Audition/Interview basis** with the High School Band Director. Courses may be taken for successive semesters. 2 semesters, 2 credits

Intermediate Chorus – Students develop musicianship and specific performance skills through ensemble and solo singing. The chorus may be composed of: (1) male chorus, (2) female chorus, (3) mixed chorus, or any combination thereof. Activities in this class create the development of quality repertoire in the diverse styles of choral literature appropriate in difficulty and range for the students. Instruction is designed so that students are enabled to connect, examine, imagine, define, try, extend, refine, and integrate music study into other subject areas. Chorus classes provide instruction in creating, performing, conducting, listening to, and analyzing, in addition to focusing on the specific subject matter. Students develop the ability to understand and convey the composer's intent in order to connect the performer with the audience. Students have the opportunity to experience live performances by professionals during and outside of the school day. A limited amount of time, outside of the school day, may be scheduled for dress rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and music goals. Students must participate in performance opportunities, outside of the school day, that support and extend learning in the classroom. This is a Core 40 and AHD course and may be taken for successive semesters.

Prerequisites: None 2 semesters, 2 credits

Advanced Chorus "Manitous" – Students taking Advanced Chorus develop musicianship and specific performance skills through ensemble and solo singing. The chorus may be composed of: (1) male chorus, (2) female chorus, (3) mixed chorus or any combination thereof. Activities create the development of a quality repertoire in the diverse styles of choral literature appropriate in difficulty and range for the students. Instruction is designed to enable students to connect, examine, imagine,

define, try, extend, refine, and integrate music study into other subject areas. Chorus classes provide instruction in creating, performing, conducting, listening to, and analyzing , in addition to focusing on the specific subject matter. Students develop the ability to understand and convey the composer's intent in order to connect the performer with the audience. Students have the opportunity to experience live performances by professionals during and outside of the school day. A limited amount of time, outside of the school day, may be scheduled for dress rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and music goals. Students must participate in performance opportunities, outside of the school day, that support and extend learning in the classroom.

The choral repertoire must be of the highest caliber. Mastery of basic choral technique must be evident. Areas of refinement include a cappella singing, sight-reading, and critical listening skills.

Prerequisites: Audition

2 semesters, 2 credits

Advanced Chorus Women's Chorus – Students taking Advanced Chorus develop musicianship and specific performance skills through ensemble and solo singing. The chorus may be composed of: (1) male chorus, (2) female chorus, (3) mixed chorus or any combination thereof. Activities create the development of a quality repertoire in the diverse styles of choral literature appropriate in difficulty and range for the students. Instruction is designed to enable students to connect, examine, imagine, define, try, extend, refine, and integrate music study into other subject areas. Chorus classes provide instruction in creating, performing, conducting, listening to, and analyzing , in addition to focusing on the specific subject matter. Students develop the ability to understand and convey the composer's intent in order to connect the performer with the audience. Students have the opportunity to experience live performances by professionals during and outside of the school day. A limited amount of time, outside of the school day, may be scheduled for dress rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and music goals. Students must participate in performance opportunities, outside of the school day, that support and extend learning in the classroom.

The choral repertoire must be of the highest caliber. Mastery of basic choral technique must be evident. Areas of refinement include a cappella singing, sight-reading, and critical listening skills.

Prerequisites: Audition

2 semesters, 2 credits

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. Course may be taken one or two semesters. This course fulfills the requirement for one of two Fine Arts credits for a Core 40 with Academic Honors diploma. It counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.

Prerequisites: None

1 semester, 1 credit

Student Publications Yearbook, a course based on *Indiana's Academic Standards for English/Language Arts* and the *High School Journalism Standards*, is the continuation of the study of journalism. Students demonstrate their ability to do journalistic writing and design for high school publications, including school newspapers and yearbooks, and a variety of 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 publications or media

staffs so that they may prepare themselves for career paths in journalism, communications, writing, or related fields. This course also fulfills a Language Arts requirement.

Prerequisites: Teacher recommendation and application

2 semesters, 2 credits

FOREIGN LANGUAGE

The state standards for foreign language learning are organized within the five goal areas proposed by the national foreign language standards (*the Five C's*): *Communication, Cultures, Connections, Comparisons, and Communities*. For each goal area, there are two or three standards, totaling eleven. These eleven standards are general and apply to all four levels of foreign language instruction. A complete listing of state standards is available at <http://www.doe.state.in.us>.

Evidence has been presented that a strong foreign language background (three-four years) does assist in higher SAT scores. A minimum of two years of foreign language study is usually required for students taking college preparatory courses; however, three or four years of foreign language study would be more beneficial. Also, foreign language is one of the requirements to receive an Academic Honors Diploma.

The student who wishes to enroll in a beginning foreign language course must have at least a “C” average in English class. A student should maintain at least a “C” average to advance to subsequent levels. Good attendance, completion of daily homework, class participation, and consistent effort to memorize vocabulary are essential for success in foreign language study.

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended Grade Level</u>	<u>Credit</u>
2000	*Chinese I	9-12	2
2002	*Chinese II	10-12	2
2004	*Chinese III	11-12	2
2006	*Chinese IV	12	2
2120	*Spanish I	9-12	2
2122	*Spanish II	10-12	2
2124	*Spanish III – <i>IUK S203</i>	11-12	2
2126	*Spanish IV – <i>IUK S204</i>	12	2

*Students who are enrolled in Spanish or who have previously studied Spanish are eligible to join Spanish Club. Students who are enrolled in Chinese or who have previously studied Chinese are eligible to join Chinese Club.

COURSE DESCRIPTIONS

Chinese I - This course introduces students to effective strategies for beginning Chinese language learning, and to various aspects of Chinese-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 simple sentences using characters. This course also emphasizes the development of reading and listening comprehension skills, such as recognizing letters and sounds of familiar words and comprehending brief oral directions. Additionally, students will examine the practices, products and perspectives of Chinese-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 Chinese language and culture outside of the classroom.

Prerequisite: Language Arts “C” average or better

2 semesters, 2 credits

Chinese II - This course is based on *Indiana's Academic Standards for World Languages*, builds upon effective strategies for Chinese 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 sentences and descriptions using characters. This course also emphasizes the development of reading and listening comprehension skills, such as using contextual clues to guess meaning and recognizing words and characters through stroke order and stroke count. Students will address the presentational mode by presenting prepared material on a variety of topics, as well as reading aloud to practice appropriate pronunciation. Additionally, students will describe the practices, products and perspectives of Chinese-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 Chinese language and culture outside of the classroom.

Prerequisite: Chinese I "C" average or better

2 semesters, 2 credits

Chinese III, a course based on *Indiana's Academic Standards for World Languages*, builds upon effective strategies for Chinese 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 simple paragraphs using characters. This course also emphasizes the continued development of reading and listening comprehension skills, such as using radicals, stroke order, and stroke count to guess meaning. 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. Additionally, students will continue to develop understanding of Chinese-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 Chinese language and culture outside of the classroom.

Prerequisites: Chinese I and II "C" average or better

2 semesters, 2 credits

Chinese 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 Chinese-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 Chinese language and culture in the community beyond the classroom is explored through the identification and evaluation of resources intended for native Chinese speakers.

Prerequisites: Chinese I, II and III “C” average or better

2 semesters, 2 credits

Spanish I – This is a Core 40 and AHD course which provides instruction enabling students to discuss the many reasons for learning languages and to develop an understanding of the people who speak them. Students are able to apply effective strategies for language learning and show a willingness to experience various aspects of the cultures. Within this context, the course provides students with opportunities to:

- respond to and give oral directions and commands and to make routine requests in the classroom and in public places;
- understand and use appropriate forms of address in courtesy expressions and be able to tell about daily routines and events;
- ask and answer simple questions and participate in brief guided conversations related to their needs and interests;
- read isolated words and phrases in a situational context, such as menus, signs, and schedules;
- comprehend brief written directions and information;
- read short narrative texts on simple topics; and
- write familiar words and phrases in appropriate contexts and respond in writing to various stimuli.

Additionally, students learn:

- about nonverbal communication, such as gestures and body language;
- about awareness of current events in the cultures;
- the major holidays and geographical features of the countries being studied;
- greeting and leave taking behaviors in a variety of social situations;
- the appropriate way to respond to introductions and use courtesy behaviors; and
- appropriate etiquette in a variety of social settings.

Prerequisite: Language Arts “C” or better

2 semesters, 2 credits

Spanish II – This is a Core 40 and AHD course which enables students to participate in classroom and extracurricular activities related to the language studied as well as to participate in conversations dealing with daily activities and personal interests. Students are able to:

- ask questions regarding routine activities;
- participate in conversations on a variety of topics;
- relate a simple narrative about a personal experience or event;
- interact in a variety of situations to meet personal needs, such as asking permission, asking for or responding to an offer of help, and expressing preferences pertaining to everyday life;
- understand main ideas and facts from simple texts over familiar topics;
- read aloud with appropriate intonation and pronunciation; and
- write briefly in response to given situations, for example postcards, personal notes, phone messages, and directions, as well as write letters using culturally appropriate format and style.

Additionally, students become:

- familiar with major geographical features, historical events, and political structures of the country(ies) being studied;
- familiar with different aspects of the culture, including the visual arts, architecture, literature and music, using the foreign language where appropriate;
- able to extend and respond to hospitality as a host or a guest; and
- aware of time expectations, such as arriving for appointments and social engagements.

Prerequisites: Spanish I with "C" average or above

2 semesters, 2 credits

Spanish III (IU S203) – This is a Core 40 and AHD course which provides instruction enabling students to understand and appreciate other cultures by comparing social behaviors and values of people using the languages being learned. Students are willing to initiate and participate in discussions concerning these cultures. (dual credit option) In addition, students are able to:

- respond to factual and interpretive questions and interact in a variety of social situations, such as expressing regrets, condolences, and complaints, and using more than rote memory formula phrases;
- read for comprehension from a variety of authentic materials, such as advertisements in newspapers and magazines and cartoons and personal correspondence;
- read short literary selections of poetry, plays, and short stories;
- complete authentic forms and documents and take notes that require familiar vocabulary and structures;
- write paraphrases, summaries, and brief compositions;
- describe different aspects of the culture, using the foreign language where appropriate, including: (1) major historical events, (2) political structures, (3) value systems, (4) visual arts, (5) architecture, (6) literature, and (7) music; and
- seek help in a crisis situation and participate appropriately at special family occasions, such as birthdays, weddings, funerals, and anniversaries.

Prerequisites: Spanish I and II with "C" average or above

2 semesters, 2 credits

Spanish IV (IU S204) – This is a Core 40 and AHD course which enables students to participate in classroom and extracurricular activities related to the Spanish language as presentations to the study body and to parent groups and taking leadership roles in Spanish Club. Students are willing to participate in conversations with native and advanced non-native speakers, either in their community or in the school. (dual credit option) This course also enables students to:

- respond to factual and interpretive questions, interact in complex social situations, and express opinions and make judgments;
- give presentations on cultural topics including: (1) traditions, (2) historical and contemporary events, and (3) major historical and artistic figures;
- paraphrase or restate what someone else has said;
- read for comprehension from a variety of longer authentic materials, such as newspapers and magazine articles, novels, and essays, as well as make judgments about what is read;
- write well-organized compositions on a given topic; and
- begin using the language creatively in writing simple poetry and prose.

Students are also:

- aware of the relationship between various art forms in at least one major historical period;
- aware of the major literary, musical, and artistic periods and genres of at least one of the cultures in which the language is spoken;
- able to adjust speech appropriate to the situation and audience; and
- able to participate appropriately in a variety of specific circumstances which could include public meetings, attending concerts, and using public transportation.

Prerequisites: Spanish I, II and III with "C" average or above

2 semesters, 2 credits

HEALTH AND PHYSICAL EDUCATION

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended Grade Level</u>	<u>Credit</u>	<u>Option</u>
3506	Health and Wellness Education	9-10	1	R
3542-44	Physical Education I & II	9-10	1	R
3560	Elective Physical Education	10-12	1	E
3560WT	Elective Physical Education – Weights	10-12	1	E

COURSE DESCRIPTIONS

Health and Wellness Education – High school health education provides the basis for continued methods of developing knowledge, concepts, skills, behaviors, and attitudes related to student health and well-being. This course includes the major content areas in a planned, sequential, comprehensive health education curriculum as expressed in the Indiana Health Education Proficiency Guide: (1) Growth and Development; (2) Mental and Emotional Health; (3) Community and Environmental Health; (4) Nutrition; (5) Family Life Education; (6) Consumer Health; (7) Personal Health; (8) Alcohol, Tobacco, and Other Drugs Education; (9) Intentional and Unintentional Injury; and (10) Health Promotion and Disease Prevention.

Students are provided with opportunities to explore the effect of health behaviors on an individual’s quality of life. This course assists students in understanding that health is a lifetime commitment by analyzing individual risk factors and health decisions that promote health and prevent disease. Students are also encouraged to assume individual responsibility for becoming competent health consumers. A variety of instructional strategies, including technology, are used to further develop health literacy. **This course is required to meet state graduation requirements for ALL diplomas.**

Prerequisites: None

1 semester, 1 credit

Physical Education I & II – Physical Education I continues the emphasis on health-related fitness and developing the skills and habits necessary for a lifetime of activity. Physical Education II emphasizes a personal commitment to lifetime activity and fitness for enjoyment, challenge, self-expression, and social interaction. This course provides students with opportunities to achieve and maintain a health-enhancing level of physical fitness and increase their knowledge of fitness concepts. The course will also include a discussion of related careers. The programs include skill development and the application of rules and strategies of complex difficulty in at least three of the following different movement forms: (1) health-related fitness activities (cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition), (2) aerobic exercise, (3) team sports, (4) individual and dual sports, (5) gymnastics, (6) outdoor pursuits, (7) self-defense, (8) aquatics, (9) dance, and (10) recreational games. Ongoing assessment includes both written and performance-based skill evaluations. This course is required to meet state graduation requirements, Academic Honors diploma, and Core 40 requirements. Classes are coeducational unless the activity involves bodily contact or groupings are 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 on individual assessment. **(Extra fees will be charged for classes such as bowling and aerobics, but they will not appear on the fee slip.)**

Prerequisites: None

2 semesters - 2 credits

Elective Physical Education – Elective Physical Education promotes lifetime sport and recreational activities and provides an opportunity for an in-depth study in specific areas. A minimum of two of the following activities will be included: (1) health-related fitness activities (cardio respiratory endurance, muscular strength and endurance, flexibility and body composition), (2) team sports, (3) individual or dual sports, (4) aquatics and, (5) outdoor pursuits. It 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. Classes are coeducational unless the activity involves bodily contact or groupings are based on an objective standard of individual performance developed and applied without regard to gender. This class may be taken for additional semesters if the student maintains an “A” or has written permission from the instructor. **Students will be limited to one Elective P.E. class per semester. Class enrollment is limited to 24.**

Prerequisites: Physical Education I and II with an “A” or written permission from the instructor 1 semester, 1 credit

Elective Physical Education-Weights – Elective Physical Education promotes lifetime sport and recreational activities and provides an opportunity for an in-depth study in specific areas. A minimum of two of the following activities will be included: (1) health-related fitness activities (cardio respiratory endurance, muscular strength and endurance, flexibility and body composition), (2) team sports, (3) individual or dual sports, (4) aquatics and, (5) outdoor pursuits. It 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. Classes are coeducational unless the activity involves bodily contact or groupings are based on an objective standard of individual performance developed and applied without regard to gender. This class may be taken for additional semesters if the student maintains an “A” or has written permission from the instructor. **Students will be limited to one Elective P.E. class per semester. Class enrollment is limited to 24.**

Prerequisites: Physical Education I and II with an “A” or written permission from the instructor 1 semester, 1 credit

LANGUAGE ARTS

All freshmen, sophomores, and juniors will be enrolled in an English/Language Arts class. The department recommends that a student not enroll in more than two levels of English 9, 10, or 11 during a semester. A third-year student may not advance into English 11 until receiving credit for both semesters of English 9.

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended Grade Level</u>	<u>Credits</u>
1002	English 9	9	2
1004	English 10	10	2
1006	English 11	11	2
1008	English 12	12	2
1098	Adv. Composition/English Composition - <i>IU W131</i>	12	1
1092	Creative Writing	10-12	1
1034	Film Literature	10-12	1
1078	Adv. Speech & Communication/Fundamentals of Public Speaking - <i>IU S121</i>	11-12	1
1052	World Literature - <i>IU L202</i>	12	1
1086	Student Publications Yearbook	10-12	2

COURSE DESCRIPTIONS

English 9, 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.

Prerequisites: None

2 semesters, 2 credits

English 10, 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.

Prerequisites: English 9

2 semesters, 2 credits

English 11, an integrated English course based on *Indiana’s Academic Standards for English/Language Arts* in Grade 11, 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.

Prerequisites: English 9 and English 10

2 semesters, 2 credits

English 12, an integrated English course based on *Indiana's Academic Standards for English/Language Arts* for Grade 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 for Grade 12 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

Prerequisites: English 9, English 10, and English 11

2 semesters, 2 credits

Advanced Composition/English Composition (IU W131), a course based on *Indiana's Academic Standards for English/Language Arts* and emphasizing the *High School Composition Standards*, is a study and application of the rhetorical (effective) writing strategies of exposition and persuasion. Students write expository critiques of nonfiction selections, literary criticism of fiction selections, persuasive compositions, and research reports. **ADVANCED COMPOSITION PROJECT:** Students write job applications, resumes, and other informational documents that may include the development of flyers, posters, brochures, program agendas, or reports incorporating visual information in the form of pictures, graphs, or tables. **Can be taken for Dual Credit (HS and post-secondary – 3 college credits)**

Prerequisites: English 9, English 10, English 11
or teacher recommendation

1 semester, 1 credit

Creative Writing, a course based on *Indiana's Academic Standards for English/Language Arts* and emphasizing the *High School Composition Standards*, is a study and application of the rhetorical (effective) 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. **CREATIVE WRITING PROJECT:** Students complete a project, such as a short story, a narrative or epic poem, a persuasive speech or letter, a book review, a script or short play, or other creative compositions, which demonstrates knowledge, application, and writing progress in the Creative Writing course content.

Prerequisites: English 9

1 semester, 1 credit

Film Literature, a course based on *Indiana's Academic Standards for English/Language Arts* and emphasizing the *High School Literature Standards*, is a study of how literature is adapted for film or media and includes role playing as film directors for selected screen scenes. Students read about the history of film, the reflection or influence of film on the culture, and issues of

interpretation, production and adaptation. Students examine the visual interpretation of literary techniques and auditory language in film and the limitations or special capacities of film versus text to present a literary work. Students analyze how films portray the human condition and the roles of men and women and the various ethnic or cultural minorities in the past and present.

FILM LITERATURE PROJECT: Students complete a project, such as doing an historical timeline and bibliography on the development of film or the creation of a short- subject film, which demonstrates knowledge, application, and progress in the Film Literature course content.

Prerequisites: English 9

1 semester, 1 credit

Advanced Speech and Communication/Fundamentals of Public Speaking (IU S121), a course based on *Indiana's Academic Standards for English/Language Arts* and emphasizing the *High School Speech and Communication Standards*, is the study and application of skills in listening, oral interpretation, media communications, research methods, and oral debate. Students deliver different types of oral and multi-media presentations, including speeches to inform, to motivate, to entertain, and to persuade through the use of impromptu, extemporaneous, memorized, or manuscript delivery. **ADVANCED SPEECH AND COMMUNICATION PROJECT:** Students complete a project, such as multi-media presentations that are reflective, reports or historical investigations, responses to literature, or persuasive arguments, which demonstrates knowledge, application, and speaking progress in the Advanced Speech and Communication course content.

Prerequisites: Teacher recommendation

1 semester, 1 credit

World Literature, a course based on Indiana's Academic Standards for English Language Arts and the Common Core State Standards for English Language Arts, is a study of ancient and modern representative works by major authors from six continents: Africa, Asia, Australia, Europe, North America, and South America. Students examine a wide variety of literary genres and themes. Students analyze how the ideas and concepts presented in the works are both interconnected and reflective of the cultures and historical periods of the countries represented by the authors. Fulfills an English Language Arts requirement for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

NOTE: Students are strongly encouraged to combine this course with a composition course that they take before, concurrently, or after the course.

Prerequisites: English 9, 10, 11

1 semester, 1 credit

Student Publications Yearbook, a course based on *Indiana's Academic Standards for English/Language Arts* and the *High School Journalism Standards*, is the continuation of the study of journalism. Students demonstrate their ability to do journalistic writing and design for high school publications, including school newspapers and yearbooks, and a variety of 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 publications or media staffs so that they may prepare themselves for career paths in journalism, communications, writing, or related fields. This course also fulfills a Fine Arts requirement.

Prerequisites: Teacher recommendation and application

2 semesters, 2 credits

MATHEMATICS

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended</u>	
		<u>Grade Level</u>	<u>Credit</u>
2516	Algebra Enrichment	9	2
2520	Algebra I	9-10	2
2522	Algebra II	9-12	2
4512	Business Math (<i>Math credit only for General Diploma</i>)	10-11	2
2552	PreCalculus/Trigonometry – <i>IPFW MA15300 and MA15400</i>	11-12	2
2562	Calculus AB, AP – <i>IPFW MA16500</i>	12	2
2532	Geometry	9-10	2

COURSE DESCRIPTIONS

Algebra Enrichment is a mathematics support course for *Algebra I*. The 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 Enrichment* 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 Enrichment* combines standards from high school courses with foundational standards from the middle grades. Algebra Enrichment is designed as a support course for Algebra I. As such, a student taking Algebra Enrichment must also be enrolled in Algebra I during the same academic year. This class counts as a mathematics course for the General Diploma only or as an elective for the Core 40 and Honors diplomas.

2 semesters, 2 credits

Algebra I - This class provides a formal development of the algebraic skills and concepts necessary for students to succeed in advanced courses. In particular, the instructional program in this course provides for the use of algebraic skills in a wide range of problem-solving situations. The concept of function is emphasized throughout the course. Topics include: (1) operations with real numbers, (2) linear equations and inequalities, (3) relations and functions, (4) polynomials, (5) algebraic fractions, and (6) nonlinear equations. **Qualifies as a Quantitative Reasoning.**

2 semesters, 2 credits

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

Prerequisites: Algebra I

2 semesters, 2 credits

Geometry - This course is available to all students who have satisfactorily completed Algebra I.

Knowledge of geometric figures and their properties is a primary goal of geometry. Emphasis shall be placed on using this knowledge to develop skills in analysis and problem solving. The use of deductive and inductive reasoning shall be a major concept studied, and the course will include formal proofs. Spatial visualization in both two and three dimensions is a necessary skill and experiences are provided to improve this ability. **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Algebra I

2 semesters, 2 credits

Algebra II - This course is a continuation of Algebra I. The course will include a study of the axioms, theorems, definitions, and properties of both real and complex numbers. Topics covered will include methods of solving first and second degree equations, systems of equations in one, two, or three variables, rational expressions, sequences and series, and graphing of polynomial functions. The course will also include a study of quadratic relations and their graphs, and the quadratic formula. The topics of functions and relations will be approached from a more advanced standpoint than Algebra I. As in Algebra I, problem solving will be emphasized. **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Algebra I or Geometry

2 semesters, 2 credits

PreCalculus/Trigonometry (IPFW MA15300 and MA15400) - Students enrolling in this course should enjoy mathematics and have done well in previous courses. Emphasis in the first semester will be on the review of algebra and study of graphing techniques; function and logarithms are included. The second semester will consider trigonometry and the application to solving right triangles, trigonometric identities, trigonometric functions, and the solution of equations involving them. The second semester will also include an introduction to Calculus including the concepts of sequences, series, limits, and derivatives. **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Algebra I, Algebra II, Geometry

2 semesters, 2 credits

Calculus AB, AP (IPFW MA16500) is a course that provides students with the content established by the College Board. Topics include: (1) functions, graphs, and limits: analysis of graphs, limits of functions, asymptotic and unbounded behavior, continuity as a property of functions (2) derivatives: concepts of the derivative, derivative at a point, derivative as a function, second derivatives, application and computation of derivatives, and (3) integrals: interpretations and properties of definite integrals, applications of integrals, fundamental theorem of calculus, techniques of antidifferentiation, and numerical approximations to definite integrals. This class requires a commitment to at least two hours of homework per class period. Students have the option to take the Calculus AP exam in May. (dual credit option) **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Algebra I, Algebra II, Geometry,
Pre-Calculus/Trigonometry

2 semesters, 2 credits

MULTIDISCIPLINARY

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended</u>	
		<u>Grade Level</u>	<u>Credit</u>
0500	Basic Skills	9-12	2
0502	Cadet Teaching Experience	11-12	2
0532	College-Entrance Preparation (<i>semester 1</i>)	11	1
		(<i>semester 2</i>)	10
0520	Peer Tutoring	11-12	2
5256	Professional Career Internship	11-12	2
5902	Interdisciplinary Cooperative Education (I.C.E.)	11-12	3-6

COURSE DESCRIPTIONS

Basic Skills Development is a multidisciplinary course which 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 that 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 student 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.

Prerequisites: None

One credit per semester up to 8 credits

Cadet Teaching Experience - This elective course provides students in grades 11 or 12 organized exploratory teaching experiences in grades K through 9. All teaching experiences should be preplanned by the high school Cadet Teaching Experience teacher-trainer and the cooperating teacher(s) who are interested in supervising prospective teachers and providing them with pre-training experiences in one or more classes. This course provides a balance of class work relating to: (1) classroom organization, (2) classroom management, (3) the curriculum and instructional process, (4) observations of teaching, and (5) instructional experiences.

Study topics and background reading provide the cadets information concerning the teaching profession and the nature of the cadet teachers' assignments. Evaluation is based upon the cadet teachers' cooperation, day-to-day practical performance, and class work including the cadets' potential ability to teach. The total workload of the Cadet Teaching course is comparable to those for other subjects in the high school curriculum. **Class enrollment limited to 10 students.**

Prerequisites: None

One credit per semester up to 4 credits

College Entrance Preparation (COL-ENT PREP) - utilizes individual student score reports from the PSAT and/or the PLAN to prepare students for the SAT, ACT, the Accuplacer and Compass assessments. Based on these score reports, students will receive targeted instruction to strengthen their foundations in critical reading, writing, mathematics, and science (all sections of college admission and placement exams). As appropriate, the course will also encompass test taking strategies to prepare students for success on a high-stakes assessment. Teachers are encouraged to use a curriculum with longitudinal, successful results. Course may also include college selection and application units, to best prepare students for overall college-readiness.

Being "college ready" means being prepared for any postsecondary education or training experience, including study at two- and four-year institutions leading to a postsecondary

credential (i.e., a certificate, license, Associate's or Bachelor's degree). Being ready for college means that a high school Indiana Department of Education 184 October 1, 2011 State Approved Course Titles & Descriptions High School graduate has the English and mathematics knowledge and skills necessary to qualify for and succeed in entry-level, credit-bearing college courses without the need for remedial coursework. This class counts as an elective credit for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.

Prerequisite: Algebra II (or concurrent enrollment in Algebra II) 1 semester, 1 credit

I.C.E. - The Interdisciplinary Cooperative Education (ICE) program spans all vocational program areas. The program is designed to furnish students with the opportunity of working during school release time in a career area of their choice. The area of work is to be of enough interest that the student may choose this or a related area as a goal for future employment.

The program requires students to be able to schedule period four for the ICE classroom related work and periods 5, 6, and 7 for on-the-job experiences. It is recommended that the student work during the school release time. Students are required to work a minimum of **15 hours** a week.

Application should be made through the guidance office when enrolling for senior classes. Mid-term enrollment is not permitted. There are only 18 student positions available each year. This is a **senior** level class. ***Priority will be given to those students whose jobs best compliment their chosen career goals.***

Prerequisites: None 2 semesters, 6 credits

Peer Tutoring- This course provides high school students with an organized exploratory experience to assist students in kindergarten through grade 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. **Class enrollment limited to 10 students.**

Prerequisites: None One credit per semester up to 2 credits

Professional Career Internship is a Career and Technical Education Business and Information Technology course that is designed to provide opportunities for students to explore careers that require additional degrees or certification following high school. The emphasis of the experience is on applying skills developed through instruction and on learning new career competencies at the internship site. The internship is tailored to the unique needs and interests of the student and is considered a high school capstone experience towards fulfillment of the student's meaningful future plan. Upon completion of the internship, students will review and revise their career plans. A training agreement outlines the expectations of all parties: the intern, parent/guardian, site supervisor/mentor, internship supervisor, and the school. Students participating in these structured experiences will follow class, school, business/industry/ organization, State, and Federal guidelines. Internships may be paid or unpaid and must include a classroom component (such as a series of seminars, workshops, or class meetings) and regular contact between the interns and internship coordinator. A minimum of 70 hours of workplace experience and a minimum of 15 hours of workshops, seminars, and/or classroom activities in required for one

credit. Internship placement must match career interest.

Prerequisites: Computer Applications and 4 credits in the student's career pathway.

- Credits: A one- or two-credit course over one semester
- A minimum of 70 hours of workplace experience and a minimum of 15 hours of workshops, seminars, and/or classroom activities is required for one credit
- A minimum of 140 hours of workplace experience and a minimum of 30 hours of workshops, seminars, and/or classroom activities is required for two credits
- Internship placement must match career interest

RESPONSE TO INSTRUCTION

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended Grade Level</u>	<u>Credit</u>
1010	Language Arts Lab	9-12	2
1120	Read 180 (Developmental Reading)	9-12	2
2560	Mathematics Lab	9-12	2

COURSE DESCRIPTIONS

Language Arts Lab is a supplemental course that provides students with individualized or small group instruction designed to support success in completing language arts course work aligned with *Indiana's Academic Standards for English/Language Arts* in Grades 9-12 and the *Common Core State Standards for English/Language Arts*, focusing on the Writing Standards.

- Counts as an English/Language Arts Elective only for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- This course is for students who need additional support in all the language arts (reading, writing, speaking and listening), especially in writing.
- NOTE: The course may also be used for students who need extra preparation to take Advanced Placement classes or college placement examinations.

Read 180 (Developmental Reading) is a supplemental course that provides students with individualized instruction designed to support success in completing language arts course work aligned with *Indiana's Academic Standards for English/Language Arts* in Grades 9-12 and the *Common Core State Standards for English/Language Arts*, focusing on the Reading .

- Counts as one English credit and one Elective credit for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- This course is for students who need additional support in vocabulary development and reading comprehension.
- NOTE: The course may also be used for students who need extra preparation to take Advanced Placement classes or college placement examinations.

Mathematics Lab provides students with individualized instruction designed to support success in completing mathematics coursework aligned with *Indiana's Academic Standards for Mathematics*.

- Counts as an Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

SCIENCE

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended Grade Level</u>	<u>Credit</u>
3024	Biology I	9-12	2
3064	Chemistry I	10-12*	2
3066	Chemistry II, General	12	2
3044	Earth and Space Science	9-12	2
5070	Advanced Life Sciences: Animals	10-12	2
3108	Integrated Chemistry-Physics	9-12	2
3084	Physics I	11-12	2
5218	Principles of the Biomedical Sciences	9-12	2
5216	Human Body Systems (Biomed II - PLTW)	10-12	2
5217	Medical Intervention (Biomed III - PLTW)	11-12	2
5219	Biomedical Innovations (Biomed IV – PLTW)	12	2

COURSE DESCRIPTIONS

Biology I – Biology I is a course based on laboratory investigations that include a study of the structures and functions of living organisms and their interactions with the environment. At a minimum, students enrolled in Biology I explore the structure and function of cells, cellular processes, and the interdependencies of organisms within populations, communities, ecosystems, and the biosphere. Students work with concepts, principles, and theories of the living environment. In addition, students enrolled in this course are expected to: (1) gain an understanding of the history and development of biological knowledge, (2) explore the uses of biology in various careers, and (3) investigate biological questions and problems related to personal needs and societal issues. The course fulfills the Biology requirement for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.

Prerequisites: None

2 semesters, 2 credits

Chemistry I – This is an introductory lab course that focuses on General Chemistry. The topics covered are the equivalent of one semester of college General (inorganic) Chemistry. Students have opportunities to: (1) gain an understanding of the history of chemistry, (2) explore careers and social issues, and (3) learn and practice laboratory safety. Strong math and logic skills are necessary.

Qualifies as a Quantitative Reasoning course for the Class of 2016 and beyond.

Prerequisites: Algebra 1 and Geometry
(Algebra 2 may be taken concurrently)

2 semesters, 2 credits

Chemistry II, General - This course leads students into a more in-depth study of General Chemistry. The course uses a college text and covers the equivalent of two semesters of college general (inorganic) chemistry. Students will have opportunities for extended laboratory and literature investigations of chemical reactions of matter in living and nonliving materials. This course stresses the unifying themes of chemistry, the development of physical and mathematical models of matter and its interactions, and the methods of scientific inquiry. **Qualifies as a Quantitative Reasoning course for the Class of 2016 and beyond.**

Prerequisite: Chemistry I and Algebra II

2 semesters, 2 credits

Earth and Space Science - Earth and Space Science I is a course focusing on the study of the earth's lithosphere, atmosphere, hydrosphere, and its celestial environment. Students enrolled in Earth and Space Science I analyze and describe Earth's interconnected systems that may be changing or may be in equilibrium. Students examine energy at work in forming and modifying earth materials, landforms, and continents through geological time. Through regular laboratory and field investigations, students understand the history and development of the earth and space sciences, explore the uses of knowledge of the earth and its environment in various careers, and investigate earth and space science problems concerning personal needs and community issues related to science.

2 semesters, 2 credits

Integrated Chemistry-Physics - This is a laboratory-based course in which students explore fundamental chemistry and physics principles. Students enrolled in this course examine, through the process of scientific inquiry, the structure and properties of matter, chemical reactions, forces, motion, and the interactions between energy and matter. Working in a laboratory environment, students investigate the basics of chemistry and physics in solving real-world problems that may have personal or social consequences beyond the classroom.

2 semesters, 2 credits

Advanced Life Science: Animals (Purdue ANSC 10200) is a standards-based, interdisciplinary science course that integrates biology, chemistry, and microbiology in an agricultural context. Students enrolled in this course formulate, design, and carry out animal-based laboratory and field investigations as an essential course component. Students investigate key concepts that enable them to understand animal growth, development and physiology as it pertains to agricultural science. This course stresses the unifying themes of both biology and chemistry as students work with concepts associated with animal taxonomy, life at the cellular level, organ systems, genetics, evolution, ecology, and historical and current issues in animal agriculture. Students completing this course will be able to apply the principles of scientific inquiry to solve problems related to biology and chemistry in highly advanced agricultural applications of animal development.

The Advanced Life Science: Animals course fulfills a Core 40 Life Science requirement for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas or counts as an Elective for any diploma.

To apply for college credit through the Purdue Advanced Life Science program a student must complete one year of biology with a minimum of a "C" and one year of chemistry or integrated chemistry/physics with a minimum of a "C". Student must have a minimum GPA of 2/5/4.0 (6.4/12.0)

Prerequisites: Biology I and Chemistry 1

2 semesters, 2 credits

Physics I – Physics I aids students in synthesizing the fundamental concepts and principles concerning matter and energy through the laboratory study of mechanics, wave motion, heat, light, electricity, electromagnetism, and atomic and nuclear physics. Students have opportunities to: (1) acquire an awareness of the history of physics and its role in the birth of technology, (2) explore the uses of its models, theories, and laws in various careers, and (3) cope with physics questions and problems related to personal needs and social issues. This is a Core 40 and AHD course (Physics) with competencies defined. Qualifies as a Quantitative Reasoning course for the General diploma only. **Qualifies as a Quantitative Reasoning course for the Class of 2016 and beyond.**

Prerequisites: Algebra II and Geometry

2 semesters, 2 credits

Current enrollment in Pre-Calculus is recommended

PLTW Principles of Biomedical Sciences - The course 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.

Prerequisite: None, but concurrent enrollment in Biology I is required 2 semesters, 2 credits

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.

Prerequisite: PLTW Principles of the Biomedical Sciences 2 semesters, 2 credits
“C” or higher in Biomed 1

PLTW Medical Intervention is a course that studies medical practices including interventions to support humans in treating disease and maintaining health. Using a project-based learning approach, students will investigate various medical interventions that extend and improve quality of life, including gene therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Students will also study the design and development of various interventions including vascular stents, cochlear implants, and prosthetic limbs. Lessons will cover the history of organ transplants and gene therapy with additional readings from current scientific literature addressing cutting edge developments. Using 3-D imaging software, students will design and build a model of a therapeutic protein. Schools must agree to be part of the Project Lead The Way network and follow all training and data collection requirements.

Prerequisites: PLTW Principles of the Biomedical Sciences and 2 semesters, 2 credits
PLTW Human Body Systems
“C” or higher in Biomed 2

PLTW Biomedical Innovations is a capstone course designed to give student teams the opportunity to work with one or more mentors from the scientific and/or medical community. Teams will identify a research topic, conduct research, write a scientific paper, and defend team conclusions and recommendations to a panel of outside reviewers. Students taking this course may consider working with peers enrolled in a PLTW: Pre-Engineering capstone course to jointly engineer a product that could impact healthcare.

Prerequisites: PLTW Principles of the Biomedical Sciences, 2 semesters, 2 credits

PLTW Human Body Systems, and PLTW Medical Intervention
“C” or higher in Biomed 3

SOCIAL STUDIES

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended Grade Level</u>	<u>Credit</u>
1548	World History and Civilization	9-12	2
1542	United States History	11	2
1534	Sociology	11-12	1
1514	Economics	12	1
1540	United States Government	12	1
1560	United States Government and Politics, AP	12	2

COURSE DESCRIPTIONS

World History and Civilization - The first semester is devoted to ancient world history which traces man's history from the origin of mankind to the French Revolution. Included in this portion of the course is the study of the Rise of Civilization, the Middle Ages, the Rise of the Nation-State, the Renaissance, and the Age of Discovery.

The second semester is a study of the history of the world from the French Revolution to the post-World War II period. The emphasis will be on European History with Napoleon, the Matternich Era, Industrialization, the Unification of Germany and Italy, Imperialism, and the two World Wars.

2 semesters, 2 credits

United States History - This is a study of United States History starting with the background of European settlement in the New World. Topics covered will include the Colonial Period, the Revolutionary War, the Constitution, sectionalism and nationalism, the Civil War, the industrialization of the United States, the two world wars, post-war America, Vietnam, Detente, and ending with the United States' role in a Global Political and Economic World.

Prerequisites: Student must be grade 11

2 semesters, 2 credits

Sociology - In this class we will examine the ways people interact with one another. It will include the study of interactions of groups, social institutions and the organizations of societies. Sociology also deals with vital issues and social problems. **Seniors will have preference.**

Prerequisites: Student must be grade 11 or 12

1 semester, 1 credit

Economics - This course examines the allocation of scarce resources and the economic reasoning used by people as consumers, producers, savers, investors, workers, voters, and as government agencies. Key elements include the study of scarcity, supply and demand, market structures, the role of government, national income determination, money and the role of financial institutions, economic stabilization, and trade. **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Student must be grade 12

1 semester, 1 credit

Core 40, THD and AHD Requirement

United States Government - This course provides a framework for understanding the purposes, principles, and practices of American government as established by the United States Constitution.

Students are expected to understand their rights and responsibilities as citizens and how to exercise these rights and responsibilities in national, state, and local government. Government curriculum topics include Federalism, Political Parties, Voting Behavior, the Electoral Process, the Role of Public Opinion, Congress, the Presidency, the Judicial Branch, Civil Rights and Civil Liberties, and State and Local Government. **American Government is required for graduation.**

Prerequisites: Student must be grade 12

1 semester, 1 credit

United States Government and Politics, Advanced Placement – Advanced Placement Government is for those students wishing to earn college credit during their senior year in high school. In addition to the regular government class requirements and curriculum topics, students will be required to do additional reading and research assignments on topics dealing with politics and government. College credit is granted by the college or university the student chooses to attend. Students qualify for this credit by taking the AP Test administered by The College Board at the end of the second semester in May.

Prerequisites: Student must be grade 12

2 semesters, 2 credits

TECHNOLOGY EDUCATION

<u>DOE Code</u>	<u>Course Title</u>	<u>Recommended Grade Level</u>	<u>Credit</u>
4816	Aerospace Engineering PLTW	11-12	2
4820	Civil Engineering and Architecture PLTW	10-12	2
4810	Computer Integrated Manufacturing PLTW	10-12	2
4801	Computer Science and Software Engineering PLTW	11-12	2
4812	Introduction to Engineering Design PLTW	9-12	2
4828	Engineering Design and Development PLTW	11-12	2
4814	Principles of Engineering PLTW	9-12	2

COURSE DESCRIPTION

Aerospace Engineering PLTW should provide students with the fundamental knowledge and experience to apply mathematical, scientific, and engineering principles to the design, development, and evaluation of aircraft, space vehicles and their operating systems. Emphasis should include investigation and research on flight characteristics, analysis of aerodynamic design, and impact of this technology on the environment. Classroom instruction should provide creative thinking and problem-solving activities using software that allows students to design, test, and evaluate a variety of air and space vehicles, their systems, and launching, guidance and control procedures. **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Completion of two Project Lead The Way courses 2 semesters, 2 credits

Civil Engineering and Architecture PLTW (Ivy Tech DESN 105)- This course should introduce 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. **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Intro to Engineering Design PLTW 2 semesters, 2 credits
Principles of Engineering PLTW

Computer Integrated Manufacturing PLTW (Ivy Tech CIMG 102) is a course that applies principles of rapid prototyping, robotics, and automation. This course builds upon the computer solid modeling skills developed in Introduction of Engineering Design. Students will use computer controlled rapid prototyping and CNC equipment to solve problems by constructing actual models of their three-dimensional designs. Students will also be introduced to the fundamentals of robotics and how this equipment is used in an automated manufacturing environment. Students will evaluate their design solutions using various techniques of analysis and make appropriate modifications before producing their prototypes. **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Intro to Engineering Design PLTW 2 semesters, 2 credits

Engineering Design and Development PLTW is designed to introduce students to the fundamental aspects of engineering and engineering technology. Instruction will emphasize underlying principles of engineering processes and the development of three-dimensional solid models. Instructional activities will build skills ranging from sketching simple geometric shapes to applying a solid modeling computer software package. Students will develop critical thinking and problem-solving skills through instructional activities that pose design and application challenges for which they develop solutions. The techniques learned, and equipment used, should be state of the art and reflect equipment and processes currently being used by engineers throughout the United States. **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Grade 12 or completed 3 PLTW courses

2 semesters, 2 credits

Computer Science and Software Engineering PLTW is a new Project Lead the Way course where students work in teams to develop computational thinking and solve problems. The course aims to develop computational thinking, introduce computational tools that foster creativity, and build student awareness of the tremendous demand in all fields for computer specialists and professionals who have computational skills. The course engages students in considering issues raised by the present and future societal impact of computing. Students practice problem solving with structured activities and progress to open-ended projects and problems that require planning, documentation, and communication skills. Counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

2 semesters, 2 credits

Introduction to Engineering Design PLTW (Ivy Tech DESN 102) This is the introductory course in Project Lead the Way Engineering. This course develops student problem-solving skills with emphasis placed on the development of three-dimensional solid models. Students will work from sketching simple geometric shapes to applying a solid modeling computer software package. They will learn an industrial model for solving problems and how the process is used in the manufacturing process. CAD will be used to analyze and evaluate product design. Students will use a state-of-the-art prototype machine that will build any project that they draw. An end-of-course assessment can allow students to receive college credit for this course.

Prerequisites: None

2 semesters, 2 credits

Principles of Engineering PLTW (Ivy Tech DESN 104) is a broad-based survey course designed to help students understand the field of engineering and engineering technology and its career possibilities. Students will develop engineering problem solving skills that are involved in postsecondary education programs and engineering careers. They will also learn how engineers address concerns about the social and political consequences of technological change. **Qualifies as a Quantitative Reasoning course.**

Prerequisites: Intro to Engineering Design PLTW

2 semesters, 2 credits