

Course Description Guide

Includes complete descriptions

Rochester High School

**2
0
1
8
-
2
0
1
9**



Adam Strasser, Principal

Chris Keisling, Assistant Principal

Lisa Andrews, Counselor

Tara Seuferer, Counselor

Greg Martz, Athletic Director

ORDER OF CONTENTS

| | |
|------------------------------------|----|
| STUDENT INFORMATION | 2 |
| CAREER CLUSTERS..... | 7 |
| AP/DUAL CREDIT COURSES..... | 8 |
| AGRICULTURE | 9 |
| BUSINESS..... | 13 |
| FAMILY AND CONSUMER SCIENCE | 14 |
| FINE ARTS | 19 |
| FOREIGN LANGUAGE..... | 24 |
| HEALTH AND PHYSICAL EDUCATION..... | 28 |
| INTEGRATED COURSES | 31 |
| LANGUAGE ARTS | 32 |
| MATHEMATICS | 38 |
| MULTIDISCIPLINARY | 43 |
| RESPONSE TO INSTRUCTION | 45 |
| SCIENCE..... | 47 |
| SOCIAL STUDIES..... | 51 |
| TECHNOLOGY EDUCATION..... | 55 |

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 1250 or higher on the SAT and a minimum of 560 on math and 590 on the evidence based reading and writing section.**
 - 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.

**Scores updated September, 2017

New Tech Certification

In order to receive the NT certification, 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 | Lisa Andrews Tara Seufferer |
| 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. | Sue Cash Lisa Andrews Tara Seufferer |
| 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. | Lisa Andrews Tara Seufferer |
| 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.

MATH SEQUENCE

Students entering high school have very different needs regarding math. We have created alternative placement to give each student the best chance to succeed in high. Counselors will discuss these options with students and parents.

Paths:

Pass Algebra with “C” or higher in 8th grade: Geometry in 9th grade, Algebra 2 in 10th grade

Proficient Pre-Algebra in 8th grade: Algebra 1 in 9th grade

Struggle with Pre-Algebra in 8th grade: Assisted Algebra 1 in 9th grade

LANGUAGE ARTS SEQUENCE

Students entering high school have different needs in regards to Language Arts as well. We want to ensure success in the high school. Counselors will discuss alternative placements with parents and students based on Middle School performance, testing and recommendations.

Paths:

Pass 8th grade Language Arts at 8th grade reading level: Tech Prep 9th grade, World Literature 10th grade

Struggle in 8th grade Language Arts or read below grade level: Developmental Reading or BioLit 9th grade and Assisted World Literature 10th grade

SCIENCE SEQUENCE

Students entering high school have different needs in regards to Science. We have created alternative placements to give each student the best chance to succeed in high school. Counselors will discuss these options with students and parents.

Paths:

Good skills in both Language Arts and Math: Biology 1 9th grade, Core 40 Science 10th grade

Struggle with Language Arts and/or Math: BioLit 9th grade, Core 40 Science 10th grade

ISTEP+ (TENTH GRADE)

All Indiana students will be given a test at the end of their tenth grade year covering English and mathematics. Passing these tests is a graduation requirement.

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. Martz 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 pass/fail classes. When computing GPAs (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

AP Courses

| | |
|--|------|
| AP Biology _____ | 3020 |
| AP Calculus _____ | 2562 |
| AP Computer Science A _____ | 4570 |
| AP Computer Science Principles _____ | 4568 |
| AP English Language and Composition _____ | 1056 |
| AP United States Government and Politics _____ | 1540 |
| AP United States History _____ | 1542 |

Dual Credit Courses

Agriculture

| | |
|---|------|
| Animal Science (<i>Ivy Tech AGRI 103</i>) _____ | 5008 |
| Horticulture Science (<i>Ivy Tech AGRI 116</i>) _____ | 5132 |
| Welding Technology I (<i>Ivy Tech INDT 114</i>) _____ | 5776 |

FACS

| | |
|------------------------------------|------|
| Education (<i>IU F200</i>) _____ | 5408 |
|------------------------------------|------|

Foreign Language

| | |
|--------------------------------------|------|
| Spanish III (<i>IU S203</i>) _____ | 2124 |
| Spanish IV (<i>IU S204</i>) _____ | 2126 |

Language Arts

| | |
|--|------|
| Adv. Composition/English Composition (<i>IU W131</i>) _____ | 1098 |
| Adv. Speech & Communication/Fundamentals of Public Speaking (<i>IU S121</i>) _____ | 1078 |
| Literary Interpretation (<i>IU L202</i>) _____ | 1124 |

Mathematics

| | |
|---|------|
| Calculus AP AB (<i>IPFW MA 16500</i>) _____ | 2544 |
| PreCalculus (<i>IPFW MA15300</i>) _____ | 2568 |
| Trigonometry (<i>IPFW MA15400</i>) _____ | 2566 |

Science

| | |
|---|------|
| Biology (<i>IU L100</i>) _____ | 3090 |
| Biomedical Innovation (<i>Ivy Tech PLTW BIOT 107</i>) _____ | 5219 |

Technology

| | |
|---|------|
| Adv. Manufacturing I (<i>Ivy Tech ADMF 101</i>) _____ | 5608 |
| Adv. Manufacturing II (<i>Ivy Tech ADMF 102</i>) _____ | 5606 |
| Civil Engineering and Architecture (<i>Ivy Tech DESN 105</i>) _____ | 4820 |
| Computer Integrated Manufacturing (<i>Ivy Tech PLTW ADMF 116</i>) _____ | 4810 |
| Introduction to Engineering Design (<i>Ivy Tech DESN 101</i>) _____ | 4812 |
| Principles of Engineering (<i>Ivy Tech DESN 104</i>) _____ | 4814 |

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 | 18-19 | 19-20 | 20-21 |
|--|-------|-------|-------|
| Agribusiness Management (fall) | X | X | X |
| Ag Power, Structure and Technology | | | |
| Ag Construction (fall) | X | X | X |
| Welding Technologies I (spring) - <i>Ivy Tech INDT 114</i> | X | X | X |
| Animal Science – <i>Ivy Tech AGRI 103</i> | X | | X |
| Horticulture Science – <i>Ivy Tech AGRI 116</i> | X | X | X |
| Intro to Agriculture Food & Natural Resources | X | X | X |
| Landscape Management (spring) | | X | |
| Natural Resource Management (spring) | X | | X |
| Plant and Soil Science | | X | |
| Supervised Agricultural Experience Program (spring and summer) | X | X | X |

Agricultural Education Course Descriptions

| <u>DOE Code</u> | <u>Course Title</u> | <u>Recommended Grade Level</u> | <u>Credit</u> |
|-----------------|--|------------------------------------|---------------|
| 5002 | Agribusiness Management | 10 - 12 | 2 |
| 5088 | Agricultural Power, Structure and Technology | 11 - 12 | 1 |
| 5008 | Animal Science <i>Ivy Tech AGRI 103</i> | 10 - 12 | 1 |
| 5056 | Intro to Ag Food and Natural Resources | 9 - 12 | 2 |
| 5132 | Horticulture Science <i>Ivy Tech AGRI 116</i> | 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 (spring and 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 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. Counts as a Directed Elective or Elective for all diplomas.

Recommended Prerequisites: None

2 semesters, 2 credits

Agribusiness Management provides foundational concepts in agribusiness. This course introduces students to the principles of business organization and management from a local and global perspective while incorporating technology. Concepts covered in the course include food and fiber, forms of business, finance, marketing, management, sales, leadership development, supervised agricultural experience career opportunities in the area of agribusiness management. Counts as an Elective or Directed Elective for all diplomas. Qualifies as a quantitative reasoning course. This course is aligned with postsecondary courses for Dual Credit.

Recommended Prerequisites: Intro to Agriculture,
Food and Natural Resources

2 semesters, 2 credits

Animal Science provides students with an overview of the animal science field. Students participate in a large variety of activities and laboratory work including real and simulated animal science experiences and projects. All areas that the students study can be applied to both large and small animals. Topics to be addressed include: anatomy and physiology, genetics, reproduction, nutrition, common diseases and parasites, social and political issues related to the industry and management practices for the care and maintenance of animals while incorporating leadership development, supervised agricultural experience and learning about career opportunities in the area of animal science.

Recommended Prerequisites: Intro to Agriculture
Food and Natural Resources

2 semesters, 2 credits

Horticultural Science (Ivy Tech AGRI 116) is 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 plants and its products. Topics covered include: reproduction and propagation of plants, plant growth, growth media, management practices for field and greenhouse production, marketing concepts, production of plants of local interest and pest management. Students participate in a variety of activities to include extensive laboratory work usually in a school greenhouse, leadership development, supervised agricultural experience and learning about career opportunities in the area of horticulture science. is 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 plants and its products. Topics covered include: reproduction and propagation of plants, plant growth, growth media, management practices for field and greenhouse production, marketing concepts, production of plants of local interest and pest management. Students participate in a variety of activities to include extensive laboratory work usually in a school greenhouse, leadership development, supervised agricultural experience and learning about career opportunities in the area of horticulture science. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Life Science or Physical Science requirement for the General Diploma.

Recommended Prerequisites: Intro to Agriculture,
Food and Natural Resources

2 semesters, 2 credits

Landscape Management I 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. Counts as a Directed Elective or Elective for all diplomas. Qualifies as a quantitative reasoning course. This course is aligned with postsecondary courses for Dual Credit.

Recommended Prerequisites: Intro to Agriculture, 2 semesters, 2 credits
Food and Natural Resources

Natural Resources 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. Counts as a Directed Elective or Elective for all diplomas. This course is aligned with postsecondary courses for Dual Credit.

Recommended Prerequisites: Intro to Agriculture, 2 semesters, 2 credits
Food and Natural Resources

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

Recommended Prerequisites: Intro to Agriculture, 2 semesters, 2 credits
Food and Natural Resources

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

Recommended Prerequisites: Intro to Agriculture,
Natural Resources

2 semesters, 2 credits

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

Agriculture Construction (fall semester) - 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.

Recommended Prerequisites: Introduction to Agriculture,
Food and Natural Resources

1 semester, 1 credit

Welding Technology I (Ivy Tech INDT 114) (spring semester) includes classroom and laboratory experiences that develop a variety of skills in oxy-fuel cutting and Shielded Metal Arc welding. This course is designed for individuals who intend to make a career as a Welder, Technician, Sales, Designer, Researcher or Engineer. Emphasis is placed on safety at all times. OSHA standards and guidelines endorsed by the American Welding Society (AWS) are used. Instructional activities emphasize properties of metals, safety issues, blueprint reading, electrical principles, welding symbols, and mechanical drawing through projects and exercises that teach students how to weld and be prepared for college and career success. Counts as a Directed Elective or Elective for all diplomas.

Recommended Prerequisites: None

1 semester, 1 credit

BUSINESS

| <u>DOE Code</u> | <u>Course Title</u> | <u>Grade Level</u> | <u>Credit</u> |
|-----------------|--------------------------------------|--------------------|---------------|
| 5268 | Administrative and Office Management | 12 | 2 |
| 4524 | Introduction to Accounting | 10-12 | 2 |
| 4562 | Principles of Business Management | 11-12 | 2 |
| 5914 | Principles of Marketing | 11-12 | 2 |

Administrative and Office Management prepares students to plan, organize, direct, and control the functions and processes of a firm or organization and to perform business-related functions. Students are provided opportunities to develop attitudes and apply skills and knowledge in the areas of business administration, management, and finance. Individual experiences will be based upon the student’s career and educational goals. Counts as a Directed Elective or Elective for all diplomas

Required Prerequisites: Principles of Business Management or Principles of Marketing 2 semesters, 2 credits

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

Recommended Prerequisites: None 2 semesters, 2 credits

Principles of Business Management focuses on the roles and responsibilities of managers as well as opportunities and challenges of ethically managing a business in the free-enterprise system. Students will attain an understanding of management, team building, leadership, problem-solving steps and processes that contribute to the achievement of organizational goals. The management of human and financial resources is emphasized. Counts as a Directed Elective or Elective for all diplomas

Recommended Prerequisites: Introduction to Business 2 semesters, 2 credits

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

Recommended Prerequisites: None 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> |
|-----------------|--|------------------------------------|---------------|
| 5340 | Advanced Nutrition and Foods I and II | 9-12 | 2 |
| 5362 | Child Development and Parenting (<i>fall</i>) | 9-12 | 1 |
| 5330 | Adult Roles and Responsibilities | 10-12 | 1 |
| 5334 | Consumer Economics | 9-12 | 1 |
| 5408 | Education Professions I | 11-12 | 2 |
| 5404 | Education Professions II (<i>IU F200</i>) | 11-12 | 2 |
| 5350 | Intro to Housing & Interior Design (<i>fall</i>) | 9-12 | 1 |
| 5394 | Preparing for College and Careers (<i>fall</i>) | 9-12 | 1 |
| 5902 | Interdisciplinary Cooperative Education | 12 | 6 |
| 5974 | Work Based Learning Capstone, Multiple Pathways | 12 | 6 |

COURSE DESCRIPTIONS

Advanced Nutrition and Wellness I and II is a course which provides an extensive study of nutrition. This course is recommended for all students wanting to improve their nutrition and learn how nutrition affects the body across the lifespan. Advanced Nutrition and Wellness is an especially appropriate course for students interested in careers in the medical field, athletic training and dietetics. This course builds on the foundation established in Nutrition and Wellness, which is a required prerequisite. This is a project-based course; utilizing higher-order thinking, communication, leadership and management processes. Topics include extensive study of major nutrients, nutritional standards across the lifespan, influences on nutrition/food choices, technological and scientific influences, and career exploration in this field. Laboratory experiences will be utilized to develop food handling and preparation skills; attention will be given to nutrition, food safety and sanitation. This course is the second in a sequence of courses that provide a foundation for continuing and post-secondary education in all career areas related to nutrition, food, and wellness. ***THIS COURSE WILL BE LIMITED TO 24 STUDENTS.***

Recommended Prerequisites: Nutrition and Wellness, with 2 semesters, 2 credits

Child Development is an introductory course for all students as a life foundation and academic enrichment; it is especially relevant for students interested in careers that draw on knowledge of children, child development, and nurturing of children. This course addresses issues of child development from conception/prenatal through age 3. It includes the study of prenatal development and birth; growth and development of children; child care giving and nurturing; and support systems for parents and caregivers. A project-based approach that utilizes higher order thinking, communication, leadership, management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of child development. Direct, concrete mathematics and language arts proficiencies will be applied. Authentic applications such as introductory laboratory/field experiences with young children and/or service learning that build knowledge of children, child development, and nurturing of children are strongly recommended. This course provides the foundation for continuing and post-secondary education in all career areas related to children, child development, and nurturing of children. Qualifies as one of the F&CS courses a student can take to waive the Health and

Wellness graduation requirement. To qualify for the Health and Wellness waiver, a student must take three of the approved courses. Counts as a Directed Elective or Elective for all diplomas.

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.**

Recommended Prerequisites: None

1 semester, 1 credit

Adult Roles and Responsibilities is recommended for all students as life foundations and academic enrichment, and as a career sequence course for students with interest in family and community services, personal and family finance, and similar areas. This course builds knowledge, skills, attitudes, and behaviors that students will need as they complete high school and prepare to take the next steps toward adulthood in today’s society. The course includes the study of interpersonal standards, lifespan roles and responsibilities, individual and family resource management, and financial responsibility and resources. A project-based approach that utilizes higher order thinking, communication, leadership, management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of adult roles and responsibilities. Direct, concrete mathematics and language arts proficiencies will be applied. Service learning and other authentic applications are strongly recommended. This course provides the foundation for continuing and postsecondary education in all career areas related to individual and family life. Qualifies as one of the F&CS courses a student can take to waive the Health & Wellness graduation requirement, in place of either Human Development and Wellness or Interpersonal Relationships. To qualify for the Health and Wellness waiver, a student must take three of the approved courses. Counts as a Directed Elective or Elective for all diplomas.

Recommended Prerequisites: None

1 semester, 1 credit

Consumer Economics enables students to achieve high standards and competencies in economic principles in contexts of high relevancy and applicability to their individual, family, workplace, and community lives. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes is recommended in order to integrate suggested topics into the study of consumer economics issues. The course focuses on interrelationships among economic principles and individual and family roles of exchanger, consumer, producer, saver, investor, and citizen. Economic principles to be studied include scarcity, supply and demand, market structure, the role of government, money and the role of financial institutions, labor productivity, economic stabilization, and trade. Depending on needs and resources, this course may be taught in a local program. In schools where it is taught, it is recommended for all students regardless of their career pathway, in order to build basic economics proficiencies. Counts as a Directed Elective or Elective for all diplomas. Fulfills a **Social Studies** requirement for the General Diploma only. Qualifies as a quantitative reasoning course.

Recommended Prerequisites: None

1 semester, 1 credit

Education Professions I provides the foundation for employment in education and related careers and prepare students for study in higher education. An active learning approach that utilizes higher order thinking, communication, leadership, and management processes is recommended in order to integrate suggested topics into the study of education and related careers. The course of study includes, but is not limited to: the teaching profession, the learner and the learning process, planning instruction, learning environment, and instructional and assessment strategies. Exploratory field experiences in classroom settings and career portfolios are required components. A standards-based plan guides the students' field experiences. Students are monitored in their field experiences by the Education Professionals I teacher. Articulation with postsecondary programs is encouraged. Counts as a Directed Elective or Elective for all diplomas. **Grade 11 and 12 only.**

Recommended Prerequisites: Nutrition and Wellness, Child Development, Adv. Child Development, Interpersonal Relationships
Minimal attendance/discipline violations 2 semesters, 2 credits

Education Professions II - Education Professions II prepares students for employment in education and related careers and provides the foundation for study in higher education in these career areas. An active learning approach that utilizes higher order thinking, communication, leadership, and management processes is recommended in order to integrate suggested topics into the study of education and related careers. The course of study includes, but is not limited to: the teaching profession, the learner and the learning process, planning instruction, learning environment, and instructional and assessment strategies. Extensive field experiences in one or more classroom settings, resumes, and career portfolios are required components. A standards-based plan guides the students' field experiences. Students are monitored in their field experiences by the Education Professions II teacher. Articulation with postsecondary programs is encouraged. Counts as a Directed Elective or Elective for all diplomas.

Required Prerequisites: Education Professions I or Teacher recommendation
Minimal attendance/discipline violations 2 semester, 2 credits

Intro to Housing and Interior Design is an introductory course essential for those students interested in academic enrichment or a career within the housing, interior design, or furnishings industry. This course addresses the selection and planning of designed spaces to meet the needs, wants, values and lifestyles of individuals, families, clients, and communities. Housing decisions, resources and options will be explored including factors affecting housing choices and the types of housing available. Developmental influences on housing and interior environments will also be considered. Basic historical architectural styling and basic furniture styles will be explored as well as basic identification of the elements and principles of design. Design and space planning involves evaluating floor plans and reading construction documents while learning to create safe, functional, and aesthetic spaces. Presentation techniques will be practiced to thoroughly communicate design ideas. Visual arts concepts including aesthetics, criticism, history and production, are addressed. Direct, concrete mathematics proficiencies will be applied. A project based approach will be utilized requiring higher-order thinking, communication, leadership and management processes as housing and interior design content is integrated into the design of interior spaces while meeting specific project criteria. This course provides the foundation for further study and careers in the architecture, construction, housing, interior design, and furnishings industries. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma.

Recommended Prerequisites: None

1 semester, 1 credit

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

Recommended Prerequisites: None

1 semester, 1 credit

Interdisciplinary Cooperative Education (ICE) spans all career and technical education program areas through an interdisciplinary approach to training for employment. Time allocations are a minimum of fifteen hours per week of work-based learning and approximately five hours per week of school-based instruction. Additionally, all state and federal laws and regulations related to student employment and cooperative education must be followed. The following two components must be included as part of the Interdisciplinary Cooperative Education course. Counts as a Directed Elective or Elective for all diplomas.

Guidelines: Paid, Meets as a class 5 hours per week, Leave for work after 3rd period

Required Prerequisites: Preparing for College and Careers and a minimum of 4 credits in a logical sequence of courses related to the student's pathway and the work site placement 2 semesters, 6 credits

Work Based Learning Capstone is an instructional strategy that can be implemented as a stand-alone course or a component of any CTE course that prepares students for college and career. This strategy builds students' skills and knowledge in their chosen career path or furthers their study within the area of interest. A standards based training plan is developed by the student, teacher, and workplace mentor to guide the student's work based learning experiences and assist in evaluating achievement and performance, whether WBL is a stand-alone course or a component of a discipline-specific CTE course. Job placement must be related to the career pathway. Counts as a Directed Elective or Elective for all diplomas.

WBL Guidelines: Paid, Meets 80-90 hours per semester, Leave for work after 3rd period 2 semesters, 6 credits

WBL (Intern) Guidelines: Only paid if supervisor asks to pay, Meets 20-30 hours per semester, 2 class periods (1 for travel, 1 for work). At least 2 courses align with pathway 2 semesters, 2 credits

Required Prerequisites: Preparing for College and Careers
Minimum of 4 credits of introductory and
advanced courses related to a student's pathway
and to the work site placement

FINE ARTS

| <u>DOE Code</u> | <u>Course Title</u> | <u>Recommended</u> | |
|-----------------|---|--------------------|---------------|
| | | <u>Grade Level</u> | <u>Credit</u> |
| 4160 | Beginning/Intermediate/Advanced Concert Band | 9-12 | 1 |
| 4182 | Beginning Chorus | 9 | 1 |
| 4186 | Intermediate Chorus (Harmonia) | 10-12 | 1 |
| 4188 | Advanced Chorus (Manitous) | 9-12 | 2 |
| 4200 | Applied Music | 10-12 | 2 |
| 4206 | Music History and Appreciation | 9-12 | 1 |
| 4242 | Theater Arts I (<i>fall</i>) | 10-12 | 1 |
| 4240 | Advanced Theater Arts (<i>spring</i>) | 10-12 | 1 |
| 1086 | Student Media Yearbook and Newspaper | 10-12 | 2 |
| 4000 | Intro to Two-Dimensional Art (<i>spring</i>) | 9-12 | 1 |
| 4002 | Intro to Three-Dimensional Art (<i>spring 2020</i>) | 9-12 | 1 |
| 4040 | Ceramics (<i>spring</i>) | 10-12 | 1 |
| 4060 | Drawing I (<i>spring</i>) | 10-12 | 1 |
| 4064 | Painting (<i>spring</i>) | 11-12 | 1 |
| 4066 | Printmaking (<i>spring</i>) | 10-12 | 1 |
| 4044 | Sculpture (<i>spring 2020</i>) | 10-12 | 1 |

COURSE DESCRIPTIONS

MUSIC COURSE TITLES

Beginning/Intermediate/Advanced Concert Band is based on the *Indiana Academic Standards for High School Instrumental Music*. Students taking this course are provided with a balanced comprehensive study of music through the concert band, which develops skills in the psychomotor, cognitive, and affective domains. Ensemble and solo activities are designed to develop elements of musicianship including tone production, technical skills, intonation, music reading skills, listening skills, analyzing music, studying historically significant styles of literature, and integration of other applicable disciplines. Experiences include improvising, conducting, playing by ear, and sight-reading. Students develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma.

Recommended Prerequisites: None

2 semesters, 2 credits

Beginning Chorus (L) is based on the *Indiana Academic Standards for High School Choral Music*. Students taking Beginning Chorus develop musicianship and specific performance skills through ensemble and solo singing. This class includes the study of quality repertoire in the diverse styles of choral literature appropriate in difficulty and range for the students. Chorus

classes provide opportunities for performing, creating, and responding to music. Students develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma.

Recommended Prerequisites: None

2 semesters, 2 credits

Intermediate Chorus “Harmonia” is based on the *Indiana Academic Standards for High School Choral Music*. Students taking Intermediate Chorus develop musicianship and specific performance skills through ensemble and solo singing. This class includes the study of quality repertoire in the diverse styles of choral literature appropriate in difficulty and range for the students. Chorus classes provide opportunities for performing, creating, and responding to music. Students develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma.

Recommended Prerequisites: Beginning Chorus

2 semesters, 2 credits

Advanced Chorus “Manitous” is based on the *Indiana Academic Standards for High School Choral Music*. Students taking Advanced Chorus develop musicianship and specific performance skills through ensemble and solo singing. This class includes the study of quality repertoire in the diverse styles of choral literature appropriate in difficulty and range for the students. Chorus classes provide opportunities for performing, creating, and responding to music. Students develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma.

Recommend Prerequisites: Beginning and Intermediate Chorus
Audition

2 semesters, 2 credits

Applied Music is based on the *Indiana Academic Standards for High School Choral or Instrumental Music*. Applied Music offers high school students the opportunity to receive small group or private instruction designed to develop and refine performance skills. A variety of music methods and repertoire is utilized to refine students' abilities in performing, creating, and responding to music. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. Counts

as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma.

1 semester, 1 credit

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. The nature of this course allows for two successive semesters of instruction, provided that defined standards are utilized. This course fulfills the requirement for one of two Fine Arts credits for a Core 40 with Academic Honors diploma. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma.

Recommended Prerequisites: None

1 semester, 1 credit

THEATRE ARTS COURSE TITLES

Theatre Arts 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. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma.

Recommended Prerequisites: None

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

Recommended Prerequisites: Theatre Arts I and II

1 semester, 1 credit

VISUAL ARTS COURSE TITLES

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 the Core 40 with Academic Honors diploma.

Recommended 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

Recommended Prerequisites: Intro to Two-Dimensional Art

1 semester, 1 credit

Ceramics is a course based on the *Indiana Academic Standards for Visual Art*. Students in ceramics engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works. Students create works of art in clay utilizing the processes of hand building, molds, wheel throwing, slip and glaze techniques, and the firing processes. They reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries, and studios, and identify art-related careers. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma

Recommended Prerequisites: Intro to Two-Dimensional and
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. 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

Recommended Prerequisite: Intro to Two-Dimensional Art

1 semesters 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. 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 a Fine Arts requirement for the Core 40 Academic Honors diploma

Recommended Prerequisites: Intro to Two-Dimensional Art

1 semester, 1 credit

Printmaking is a course based on the *Indiana Academic Standards for Visual Art*. Students in printmaking engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production that lead to the creation of portfolio quality works. Students apply media, techniques, and processes with sufficient skill to communicate intended meaning. They create abstract and realistic prints using a variety of materials such as linocut, woodcut, stencil, silkscreen, photo silkscreen, and mono-print. They utilize processes such as etching, relief, and lithography to explore a variety of ideas and problems. 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. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma.

Recommended 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. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Fine Arts requirement for the Core 40 Academic Honors Diploma

Recommended Prerequisites: Intro to Two Dimensional Art
Intro to Three Dimensional Art

1 semester, 1 credit

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> |
|-----------------|------------------------|------------------------------------|---------------|
| 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 (IU-S203) | 11-12 | 2 |
| 2126 | *Spanish IV (IU-S204) | 11-12 | 2 |
| 2128 | *Spanish V | 12 | 2 |

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

COURSE DESCRIPTIONS

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. Counts as a Directed Elective or Elective for all diplomas. Fulfills a World Language requirement for the Core 40 with Academic Honors diploma.

Required Prerequisites: Chinese I and II with “C” or above

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. Counts as a Directed Elective or Elective for all diplomas. Fulfills a World Language requirement for the Core 40 with Academic Honors diploma.

Required Prerequisites: Chinese I, II and III with “C” or above 2 semesters, 2 credits

Spanish I, a course based on *Indiana’s Academic Standards for World Languages*, introduces students to effective strategies for beginning Spanish language learning, and to various aspects of Spanish-speaking culture. This course encourages interpersonal communication through speaking and writing, providing opportunities to make and respond to basic requests and questions, understand and use appropriate greetings and forms of address, participate in brief guided conversations on familiar topics, and write short passages with guidance. This course also emphasizes the development of reading and listening comprehension skills, such as reading isolated words and phrases in a situational context and comprehending brief written or oral directions. Additionally, students will examine the practices, products and perspectives of Spanish-speaking culture; recognize basic routine practices of the target culture; and recognize and use situation-appropriate non-verbal communication. This course further emphasizes making connections across content areas and the application of understanding Spanish language and culture outside of the classroom. Counts as a Directed Elective or Elective for all diplomas. Fulfills a World Language requirement for the Core 40 with Academic Honors diploma.

Recommended Prerequisite: Language Arts with “C” or above 2 semesters, 2 credits

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

and the application of understanding Spanish language and culture outside of the classroom. Counts as a Directed Elective or Elective for all diplomas. Fulfills a World Language requirement for the Core 40 with Academic Honors diploma.

Required Prerequisites: Spanish I with "C" or above 2 semesters, 2 credits

Spanish III (IU-S203), a course based on *Indiana's Academic Standards for World Languages*, builds upon effective strategies for Spanish language learning by facilitating the use of the language and cultural understanding for self-directed purposes. This course encourages interpersonal communication through speaking and writing, providing opportunities to initiate, sustain and close conversations; exchange detailed information in oral and written form; and write cohesive information with greater detail. This course also emphasizes the continued development of reading and listening comprehension skills, such as using cognates, synonyms and antonyms to derive meaning from written and oral information, as well as comprehending detailed written or oral directions. Students will address the presentational mode by presenting student-created material on a variety of topics, as well as reading aloud to practice appropriate pronunciation and intonation. Additionally, students will continue to develop understanding of Spanish-speaking culture through recognition of the interrelations among the practices, products and perspectives of the target culture; discussion of significant events in the target culture; and investigation of elements that shape cultural identity in the target culture. This course further emphasizes making connections across content areas as well the application of understanding Spanish language and culture outside of the classroom. Counts as a Directed Elective or Elective for all diplomas. Fulfills a World Language requirement for the Core 40 with Academic Honors diploma.

Required Prerequisites: Spanish I and II with "C" or above 2 semesters, 2 credits

Spanish IV (IU-S204), a course based on *Indiana's Academic Standards for World Languages*, provides a context for integration of the continued development of language skills and cultural understanding with other content areas and the community beyond the classroom. The skill sets that apply to the exchange of written and oral information are expanded through emphasis on practicing speaking and listening strategies that facilitate communication, such as the use of circumlocution, guessing meaning in familiar and unfamiliar contexts, and using elements of word formation to expand vocabulary and derive meaning. Additionally, students will continue to develop understanding of Spanish-speaking culture through explaining factors that influence the practices, products, and perspectives of the target culture; reflecting on cultural practices of the target culture; and comparing systems of the target culture and the student's own culture. This course further emphasizes making connections across content areas through the design of activities and materials that integrate the target language and culture with concepts and skills from other content areas. The use and influence of the Spanish language and culture in the community beyond the classroom is explored through the identification and evaluation of resources intended for native Spanish speakers. Counts as a Directed Elective or Elective for all diplomas. Fulfills a World Language requirement for the Core 40 with Academic Honors diploma.

Required Prerequisites: Spanish I, II and III with "C" or above 2 semesters, 2 credits

Spanish V, a course based on *Indiana's Academic Standards for World Languages*, provides opportunities for students to interact and exchange information in culturally and socially authentic and/or simulated situations to demonstrate integration of language skills with understanding of Spanish-speaking culture. This course emphasizes the use of appropriate formats, varied vocabulary and complex language structures within student communication, both

oral and written, as well as the opportunity to produce and present creative material using the language. Additionally, students will continue to develop understanding of Spanish-speaking culture through investigating the origin and impact of significant events and contributions unique to the target culture, comparing and contrasting elements that shape cultural identity in the target culture and the student's own culture, and explaining how the target language and culture have impacted other communities. This course further emphasizes the integration of concepts and skills from other content areas with the target language and cultural understanding, as well as the exploration of community resources intended for native Spanish speakers. Counts as a Directed Elective or Elective for all diplomas. Fulfills a World Language requirement for the Core 40 with Academic Honors diploma.

Required Prerequisites: Spanish I, II, III and IV with "C" 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 | Physical Education I | 9-12 | 1 | R |
| 3544 | Physical Education II | 9-12 | 1 | R |
| 3560 | Elective Physical Education - Fitness | 10-12 | 1 | E |
| 3560WT | Elective Physical Education – Weights | 10-12 | 1 | E |

COURSE DESCRIPTIONS

Health and Wellness, a course based on *Indiana’s Academic Standards for Health & Wellness*, provides the foundational information needed to help students adopt and maintain healthy behaviors. Health education should contribute directly to a student’s ability to successfully practice behaviors that protect and promote health and avoid or reduce health risks. Through a variety of instructional strategies, students practice the development of functional health information (essential concepts); determine personal values that support health behaviors; develop group norms that value a healthy lifestyle; and develop the essential skills necessary to adopt, practice, and maintain health-enhancing behaviors. This course includes the application of priority areas in a planned, sequential, comprehensive health education curriculum that addresses critical health knowledge and skills for successfully maintaining a healthy lifestyle during a child’s school years and beyond. Priority areas include: promoting personal health and wellness, physical activity, and healthy eating; promoting safety and preventing unintentional injury and violence; promoting mental and emotional health, a tobacco-free lifestyle and an alcohol- and other drug-free lifestyle; and promoting human development and family health. This course provides students with important core concepts of health and wellness and the knowledge and skills needed to successfully access valid health information, analyze the influence of others on their health behaviors, demonstrate the ability to communicate in a way to enhance and avoid or reduce health risks, demonstrate the ability to use decision-making skills to enhance health, demonstrate the ability to practice health-enhancing behaviors, and demonstrate the ability to advocate for personal, family and community health. Fulfills the Health and Wellness requirement for all diploma types.

Recommended Prerequisites: None

1 semester, 1 credit

Physical Education I focuses on instructional strategies through a planned, sequential, and comprehensive physical education curriculum that provides students with opportunities to actively participate in at **least four** of the following: team sports; dual sport activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance, all of which are within the framework of the skills, knowledge and confidence needed by the student for a lifetime of healthful physical activity and fitness. Ongoing assessment includes both written and performance-based skill evaluation. Individual assessments may be modified for individuals with disabilities, in addition to those with IEP’s and 504 plans (e.g., chronic illnesses, temporary injuries, obesity, etc.). Fulfills part of the Physical Education requirement for all diplomas. Classes are co-educational unless the activity involves bodily contact or groupings based on an objective standard of individual performance developed and applied without regard to gender. As a designated laboratory course, 25% of course time must be spent in activity

(Extra fees will be charged for classes such as bowling and aerobics, but they will not appear on the fee slip.)

Required Prerequisites: Grade 8 Physical Education 1 semester, 1 credit

Physical Education II focuses on instructional strategies through a planned, sequential, and comprehensive physical education curriculum that provides students with opportunities to actively participate **in four of the following areas that were not covered in Physical Education I:** team sports; dual sport activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance, all of which are within the framework of the skills, knowledge and confidence needed by the student for a lifetime of healthful physical activity and fitness. Ongoing assessment includes both written and performance-based skill evaluation. Individual assessments may be modified for individuals with disabilities, in addition to those with IEP's and 504 plans (e.g., chronic illnesses, temporary injuries, obesity, etc.). Fulfills part of the Physical Education requirement for all diplomas. Classes are co-educational unless the activity involves bodily contact or groupings based on an objective standard of individual performance developed and applied without regard to gender. As a designated laboratory course, 25% of course time must be spent in activity.

Required Prerequisites: Physical Education I 1 semester, 1 credit

Elective Physical Education, a course based on selected standards from *Indiana's Academic Standards for Physical Education*, identifies what a student should know and be able to do as a result of a quality physical education program. The goal of a physically educated student is to maintain appropriate levels of cardio-respiratory endurance, muscular strength and endurance, flexibility, and body composition necessary for a healthy and productive life. Elective Physical Education promotes lifetime sport and recreational activities and provides an opportunity for an in-depth study in one or more specific areas. **A minimum of two** of the following activities should be included: team sports; dual sports activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance. This course includes the study of physical development concepts and principles of sport and exercise as well as opportunities to develop or refine skills and attitudes that promote lifelong fitness. Students have the opportunity to design and develop an appropriate personal fitness program that enables them to achieve a desired level of fitness. Ongoing assessment includes both written and performance-based skill evaluation. Individual assessments may be modified for individuals with disabilities, in addition to those with IEP's and 504 plans (e.g., chronic illnesses, temporary injuries, obesity, etc.). Counts as an Elective requirement for all diplomas. The nature of this course allows for successive semesters of instruction provided defined proficiencies and content standards are utilized. Classes are co-educational unless the activity involves bodily contact or groupings based on an objective standard of individual performance developed and applied without regard to gender. **Students will be limited to one Elective P.E. class per semester. Class enrollment is limited to 24.**

Recommended Prerequisites: Physical Education I and II or 1 semester, 1 credit
written permission from the instructor

Fitness:

Students will be able to develop an understanding of fitness concepts and design a personal fitness program and learn the relationships between physical activity, physical fitness, group interaction, cooperation, an appreciation for the abilities and limitations of self and others, and various health-related outcomes. Through the course students will

gain knowledge and skills needed to develop a lifelong pattern of physical activity. By the end of the course students will improve their physical fitness by participating in group fitness classes, weight training, cross fit, walking, jogging, nutrition and other activities.

Effective Components of Fitness and Conditioning

- Students will improve their Cardiovascular Endurance, Muscular Strength, Muscular Endurance, Flexibility and Mobility
- Students will develop knowledge of and competency of a variety of fitness activities
- Teacher will provide:
 - A maximum participation for all students
 - Provide positive and specific feedback
 - Provide awareness of the needs and health related issues that are facing our youth today
 - Provide students with knowledge of creating their own personal fitness plan, with plans of achieving their personal desired results, meeting their goals
 - Will understand how making healthy life long fitness choices that will be incorporated into their daily lives

Weights:

This course promotes developing your entire body for current and future lifetime activities. This class is not purely Weight Training. You will Train your body in a variety of areas such as: Speed Training, Agility Training, Plyometric Training, Aerobic Activities, Yoga, Stretching Activities, Muscular Endurance, Muscular Strength and much more. This class is performance and skill based but will require project based learning as well. Written and Verbal Communication is also expected from a Weight Training student. Classes are coeducational and will require students to work together to create a safe environment for each person to grow in his or her own way. This class is to develop you as a whole. You may want to become a better athlete, get in better shape or just enjoy physical activity. While athletes are encouraged to take this course, it is open to anyone interested in developing his or her own personal fitness. This course may be taken for additional semesters if students maintain their grade and good attitude with instructor/peers.

Recommended Prerequisites: Grades 10-12 or
written permission from instructor

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, Tech Prep is completed during the freshman year, sophomores take World Literature, and American Studies is taken as a junior. BioLit may be taken the freshman year.

Tech Prep

| <u>DOE Code</u> | <u>Course Title</u> | <u>Grade Level</u> | <u>Credit</u> |
|-----------------|--------------------------------|--------------------|---------------|
| 1002 | English 9 | 9 | 2 |
| 4790 | Introduction to Communications | 9 | 2 |

Tech Prep is a 9th grade thematic course combining English 9 and Interactive Media. It is taught as a two-hour block with two teachers.

BioLit

| <u>DOE Code</u> | <u>Course Title</u> | <u>Grade Level</u> | <u>Credit</u> |
|-----------------|---------------------|--------------------|---------------|
| 1002 | English 9 | 9 | 2 |
| 3024 | Biology 1 | 9 | 2 |

BioLit is a 9th grade thematic course combining English 9 and Biology 1. It is taught as a two-hour block with two teachers.

World Literature

| <u>DOE Code</u> | <u>Course Title</u> | <u>Grade Level</u> | <u>Credit</u> |
|-----------------|--------------------------------|--------------------|---------------|
| 1004 | English 10 | 10 | 2 |
| 1548 | World History and Civilization | 10 | 2 |

World Literature is a 10th grade thematic course combining English 10 and World History. 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.

American Studies Advanced Placement

| <u>DOE Code</u> | <u>Course Title</u> | <u>Grade Level</u> | <u>Credit</u> |
|-----------------|-----------------------------------|--------------------|---------------|
| 1056 | AP English Language & Composition | 11 | 2 |
| 1562 | AP United States History | 11 | 2 |

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

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 |
| 1056 | AP English Language and Composition | 11 | 2 |
| 1098 | Adv. Composition/English Composition - <i>IU W131</i> | 12 | 1 |
| 1078 | Adv. Speech & Communication/Fundamentals of Public Speaking - <i>IU S121</i> | 11-12 | 1 |
| 1092 | Creative Writing | 11-12 | 1 |
| 1034 | Film Literature | 11-12 | 1 |
| 1124 | Literary Interpretation - <i>IU L202</i> | 12 | 1 |
| 1042 | Novels | 11-12 | 1 |
| 1044 | Poetry | 11-12 | 1 |
| 1022 | Biblical Literature | 11-12 | 1 |
| 1070 | Debate | 11-12 | 1 |
| 1036 | Genres of Literature | 11-12 | 1 |
| 1028 | Dramatic Literature | 11-12 | 1 |
| 1086 | Student Media: Yearbook and Newspaper | 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, focusing on literature within an appropriate level of complexity for this grade band. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance in classic and contemporary literature balanced with nonfiction. Students write, responses to literature, expository (informative), narrative, and argumentative/persuasive compositions, and sustained research assignments. Students deliver grade-appropriate oral presentations with attention to audience and purpose and access, analyze, and evaluate online information. Fulfills an English/Language Arts requirement for all diplomas

Recommended Prerequisites: None

2 semesters, 2 credits

English 10, an integrated English course based on *Indiana's Academic Standards for English/Language Arts* in Grades 9-10, is a study of language, literature, composition, and oral communication, focusing on literature with an appropriate level of complexity for this grade band. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance in classic and contemporary literature balanced with nonfiction. Students write responses to literature, expository

(informative) and argumentative/persuasive compositions, and sustained research assignments. Students deliver grade-appropriate oral presentations with attention to audience and purpose and access, analyze, and evaluate online information. Fulfills an English/Language Arts requirement for all diplomas

Recommended Prerequisites: English 9 or
Teacher Recommendation 2 semesters, 2 credits

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

Recommended Prerequisites: English 9 and English 10 or
Teacher Recommendation 2 semesters, 2 credits

English 12 (1008), an integrated English course based on *Indiana's Academic Standards for English/Language Arts* for Grade 11-12, is a study of language, literature, composition, and oral communication focusing on an exploration of point of view or perspective across a wide variety of genres. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance in classic and contemporary literature balanced with nonfiction. Students write narratives, responses to literature, academic essays (e.g. analytical, persuasive, expository, summary), and more sustained research assignments incorporating visual information in the form of pictures, graphs, charts and tables. Students write and deliver grade-appropriate multimedia presentations and access, analyze, and evaluate online information. Fulfills an English/Language Arts requirement for all diploma

Recommended Prerequisites: English 9, English 10, and English 11
or Teacher Recommendation 2 semesters, 2 credits

AP English Language and Composition is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. The course focuses on the development and revision of evidence-based analytic and argumentative writing and the rhetorical analysis of nonfiction texts. The course aligns to an introductory college-level rhetoric and writing curriculum, which requires students to develop evidence-based analytic and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Throughout the course, students develop a personal style by making appropriate grammatical choices. Additionally, students read and analyze the rhetorical elements and their effects in non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods. There is no prescribed sequence of study.

Recommended Prerequisites: English 9 and 10, Students
should be able to read and comprehend 2 semesters, 2 credits

college-level texts and apply the conventions of Standard Written English in their writing

Advanced Composition / ENG W131 Reading, Writing, & Inquiry, a course based on the *Indiana Academic Standards for English/Language Arts*, is a study and application of the rhetorical writing strategies of exposition and persuasion. Students write expository critiques of nonfiction selections, literary criticism of fiction selections, persuasive compositions, and research reports in addition to other appropriate writing tasks. Course can be offered in conjunction with a literature course, or schools may embed *Indiana Academic Standards for English/Language Arts* reading standards within curriculum. Fulfills an English/Language Arts requirement for all high school diplomas. **Class size capped at 24 students.**

Recommended Prerequisites: English 9, 10 11 earning a grade of “C” or higher
Students must have a 2.7 GPA or higher
Teacher recommendation

1 semester, 1 credit
3 credit hours (college)

Advanced Speech and Communication / Public Oral Communication S121, a course based on the *Indiana Academic Standards for English/Language Arts* and emphasizing the High School Speech and Communication Standards, is the study and application of skills in listening, oral interpretation, media communications, research methods, and oral debate. Students deliver different types of oral and multi-media presentations, including speeches to inform, to motivate, to entertain, and to persuade through the use of impromptu, extemporaneous, memorized, or manuscript delivery. Course can be offered in conjunction with a composition and literature course, or schools may embed *Indiana Academic Standards for English/Language Arts* within curriculum. Fulfills an English/Language Arts requirement for all diplomas. **Class size capped at 24 students.**

Recommended Prerequisites: English 9, 10 11 earning a grade of “C” or higher.
Students must have a 2.7 GPA or higher
Teacher recommendation

1 semester, 1 credit
3 credit hours (college)

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

Recommended Prerequisites: English 9, 10 or
Teacher Recommendation

1 semester, 1 credit

Film Literature, a course based on *Indiana's Academic Standards for English/Language Art*, 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. Course can be offered in conjunction with a composition course, or schools may embed *Indiana Academic Standards for English/Language Arts* writing standards within curriculum. Fulfills an English/Language Arts requirement for all diplomas

Recommended Prerequisites: English 9, 10 or
Teacher Recommendation

1 semester, 1 credit

Literary Interpretation ACP (IU L202) is a dual credit course through Indiana University. This course develops critical skills essential to participation in the interpretive process. Through class discussion and focused writing assignments, introduces the premises and motives of literary analysis and critical methods associated with historical, generic, and/or cultural concerns. **Class size capped at 30 students.** The specific content of this course is best described as follows:

Goals:

- To provide readers with fresh understanding of the basic elements of literature as a tool for understanding the major literary genres, including plot, point of view, characters, setting, and more.
- To help students discover the academic and sociologic value in reading to more fully understand literature in all of its genres, including poetry, short stories, the novel, and drama.
- To develop students' close reading skills as fuel for a defense of an arguable claim.
- To introduce and then to develop students' ability to generate the elements of argument, including issues, claims, evidence, audience, and warrants.
- To enable students to make useful comparisons within the same piece of literature or in that of other literary works.
- To demonstrate to students the effects of secondary elements to the context of the major literary genres, including author's life, era, culture

Recommended Prerequisites: W131 or one of the following:
SAT EBRW score of 710 or higher
ACT English score of 32 or higher

1 semester, 1 credit
3 credit hours (college)

Novels, a course based on the *Indiana Academic Standards for English/Language Arts*, is a study of the distinct features of the novel, such as narrative and fictional elements of setting, conflict, climax, and resolution, and may be organized by historical periods, themes, or authors. Students examine novels of a given period, such as Victorian, the Modern Period, or Contemporary Literature, and what distinguishes novels from short stories, epics, romances, biographies, science fiction, and others. Students analyze novels by various important authors from the past and present or sets of novels from a specific era or across several eras. Course can be offered in conjunction with a composition course, or schools may embed *Indiana Academic Standards for English/Language Arts* writing standards within curriculum. Fulfills an English/Language Arts requirement for all diplomas

Recommended Prerequisites: English 9, 10 or
Teacher Recommendation

1 semester, 1 credit

Poetry, a course based on the *Indiana Academic Standards for English/Language Arts*, is a study of poetic works, the interpretation of poetry, and the variety of structures, devices, and themes that differentiate one type of poetry from another. Students examine a wide variety of major poetic works from the English-speaking world and English translations of important works from the non-English-speaking world. Students analyze the impact of aural devices, such as meter, alliteration, assonance, and rhyme, on the overall interpretation of a poem and how poetry is a

form of literary expression that has prevailed through the ages. Course can be offered in conjunction with a composition course, or schools may embed Indiana Academic Standards for English/Language Arts writing standards within curriculum. Fulfills an English/Language Arts requirement for all diplomas

Recommended Prerequisites: English 9, 10 or
Teacher Recommendation

1 semester, 1 credit

Biblical Literature, a course based on the *Indiana Academic Standards for English/Language Arts*, is a study of the Bible, viewed from a literary standpoint, as a source of a wide variety of literary patterns, themes, and Indiana Department of Education High School Course Titles & Descriptions 131 conventions. Students examine the different books in relation to the various historical time frames of the books and in relation to related literature as it pertains to Biblical themes. Students read, discuss, and write about Biblical references (allusions) in both classical and modern literature, formation of a canonical Bible, inclusion of apocryphal and heretical writings, oral versus literate transmission of sacred history and doctrine, and questions and problems of interpretation. Course can be offered in conjunction with a composition course, or schools may embed *Indiana Academic Standards for English/Language Arts* writing standards within curriculum. Fulfills an English/Language Arts requirement for all diplomas

Recommended Prerequisites: English 9, 10 or
Teacher Recommendation

1 semester, 1 credit

Debate, a course based on the *Indiana Academic Standards for English/Language Arts*, is the study and application of the basic principles of debate involving support for the basic types of arguments (induction, deduction, causation) and debate strategies (affirmative or negative argument construction and extension, case development, refutation or rebuttal of argument claims and evidence, and persuasive speaking). 1 credit fulfills an English/Language Arts requirement for all diplomas, additional credits fulfill Elective credit for all diplomas

Recommended Prerequisites: English 9, 10 or
Teacher Recommendation

1 semester, 1 credit

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

Recommended Prerequisites: English 9, 10 or
Teacher Recommendation

1 semester, 1 credit

Dramatic Literature, a course based on the *Indiana Academic Standards for English/Language Arts*, is a study of plays and literary art as different from other literary genres. Students view live, televised, or filmed productions and stage scenes from plays or scripts. Students examine tragedies, comedies, melodramas, musicals or operas created by important playwrights and

screenwriters representing the literary movements in dramatic literature. Students analyze how live performance alters interpretation from text and how developments in acting and production have altered the way we interpret plays or scripts. Students analyze the relationship between the development of dramatic literature as entertainment and as a reflection of or influence on the culture. Course can be offered in conjunction with a composition course, or schools may embed Indiana Academic Standards for English/Language Arts writing standards within curriculum. Fulfills an English/Language Arts requirement for all diplomas

Recommended Prerequisites: English 9, 10 or

Teacher Recommendation

1 semester, 1 credit

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

The nature of this course allows for successive semesters of instruction at advanced levels. May be offered over three or four years by titling the course Beginning, Intermediate, or Advanced. Counts as a Directed Elective or Elective for all diplomas. Fulfills the Fine Arts requirement for the Core 40 with Academic Honors.

Recommended Prerequisites: Teacher recommendation and application

2 semesters, 2 credits
6 Credits Maximum

MATHEMATICS

| <u>DOE Code</u> | <u>Course Title</u> | <u>Recommended</u> | |
|-----------------|---|--------------------|---------------|
| | | <u>Grade Level</u> | <u>Credit</u> |
| 2520 | Algebra I | 9-12 | 2 |
| 2522 | Algebra II | 9-12 | 2 |
| 4512 | Business Math (<i>Math credit only for General Diploma</i>) | 10-11 | 2 |
| 2514 | CCR Bridge: Math Ready | 12 | 2 |
| 2527 | Calculus | 11-12 | 2 |
| 2562 | AP Calculus | 11-12 | 2 |
| 2532 | Geometry | 9-10 | 2 |
| 2518 | Integrated Mathematics I Lab | 9-12 | 2 |
| 2556 | Integrated Mathematics II | 9-12 | 2 |
| 2558 | Integrated Mathematics III | 9-12 | 2 |
| 2531 | Math 10 | 9-12 | 2 |
| 2564 | PreCalculus – <i>IPFW MA 15300</i> | 9-12 | 1 |
| 2546 | Probability and Statistics | 9-12 | 1 |
| 2566 | Trigonometry – <i>IPFW MA 15400</i> | 9-12 | 1 |

COURSE DESCRIPTIONS

Algebra I formalizes and extends the mathematics students learned in the middle grades. Algebra I is made up of 5 strands: Real Numbers and Expressions; Functions; Linear Equations, Inequalities, and Functions; Systems of Equations and Inequalities; Quadratic and Exponential Equations and Functions; and Data Analysis and Statistics. These critical areas deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend, and students engage in methods for analyzing, solving, and using quadratic functions. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Counts as a Mathematics Course for all diplomas. Fulfills the Algebra I/Integrated Mathematics I requirement for all diplomas. Students pursuing Core 40, Core 40 with Academics Honors, or Core 40 with Technical Honors diploma should receive credit for Algebra I by the end of Grade 9.

Recommended Prerequisites: None

2 semesters, 2 credits

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

Mathematics Course for all diplomas. Fulfills the Algebra II/Integrated Mathematics III requirement for all diplomas.

Recommended Prerequisites: Algebra I

2 semesters, 2 credits

Business Math is a course designed to prepare students for roles as entrepreneurs, producers, and business leaders by developing abilities and skills that are part of any business environment. A solid understanding of math including algebra, basic geometry, statistics, and probability provides the necessary foundation for students interested in careers in business and skilled trade areas. The content includes mathematical operations related to accounting, banking and finance, marketing, and management. Instructional strategies should include simulations, guest speakers, tours, Internet research, and business experiences. Counts as an Elective or Directed Elective for all diplomas. Fulfills a Mathematics requirement for the General Diploma or Certificate of Completion only. Qualifies as a quantitative reasoning course.

Recommended Prerequisites: Algebra I

2 semesters, 2 credits

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

Recommended Prerequisites: Pre-Calculus and Trigonometry

2 semesters, 2 credits

CCR Bridge: Math Ready course will include and reinforce the Algebra 1, Geometry, Algebra 2 and Statistics skills necessary to be ready for an entry-level college math course. This course emphasizes understanding of math concepts rather than just memorizing procedures. Math Ready students learn the context behind the procedure: why to use a certain formula or method to solve a problem, for example. This equips them with higher-order thinking skills in order to apply math skills, functions and concepts in different situations. The course is intended for students who currently have achieved the minimum math requirements for college entry. The content of this course is designed to enhance students' math skills so that they are ready for college-level math assignments. It is not designed to prepare students for college-level math in STEM majors. Counts as a Mathematics Course for all diplomas.

Recommended Prerequisites: Grade 11 students who have not passed the Grade 10 Math ISTEP+ and have scored below a 45 on the PSAT test OR students who score below proficient on a diagnostic test should be placed in the Literacy Ready course.

2 semesters, 2 credits

Geometry formalizes and extends students' geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Geometry is made up of seven strands: Logic and Proofs; Points, Lines, Angles, and Planes; Triangles; Quadrilaterals and Other Polygons; Circles; Transformations; and Three-dimensional Solids. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process

Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Counts as a Mathematics Course for all diplomas. Fulfills the Geometry/Integrated Mathematics II requirement for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.

Recommended Prerequisites: Algebra I

2 semesters, 2 credits

Integrated Mathematics I formalizes and extends the mathematics students learned in the middle grades. The critical areas deepen and extend understanding of linear relationships, in part by contrasting them with exponential phenomena, and in part by applying linear models to data that exhibit a linear trend. Integrated Mathematics I use properties and theorems involving congruent figures to deepen and extend understanding of geometric knowledge from prior grades. The final unit in the course ties together the algebraic and geometric ideas studied. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Counts as a Mathematics Course for all diplomas. Fulfills the Algebra I/Integrated Mathematics I requirement for all diplomas. Students pursuing Core 40, Core 40 with Academic Honors, or Core 40 with Technical Honors diploma should receive credit for Integrated Mathematics I by the end of Grade 9.

Recommended Prerequisites: None

2 semesters, 2 credits

Integrated Mathematics II focuses on quadratic expressions, equations, and functions; by comparing their characteristics and behavior to those of linear and exponential relationships from *Integrated Mathematics I*. The need for extending the set of rational numbers arises and real and complex numbers are introduced so that all quadratic equations can be solved. The link between probability and data is explored through conditional probability and counting methods, including their use in making and evaluating decisions. The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships. Circles, with their quadratic algebraic representations, rounds out the course. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Counts as a Mathematics Course for all diplomas. Fulfills the Geometry/Integrated Mathematics II requirement for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.

Recommended Prerequisites: Integrated Mathematics I or
Teacher recommendation

2 semesters, 2 credits

Integrated Mathematics III provides students the opportunity to pull together and apply the accumulation of learning that they have from their previous courses. They apply methods from probability and statistics to draw inferences and conclusions from data. Students expand their repertoire of functions to include polynomial, rational, and radical functions. They expand their study of right triangle trigonometry to include general triangles. Finally, students bring together all of their experiences with functions and geometry to create models and solve contextual problems. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem

situations. Counts as a Mathematics Course for all diplomas. Fulfills the Algebra II/Integrated Mathematics III requirement for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.

Recommended Prerequisites: Integrated Mathematics II
Teacher recommendation

2 semesters, 2 credits

Math 10 is a new two-semester course designed to reinforce and elevate the Algebra 1 and 8th grade geometry knowledge and skills necessary for students to successfully complete high school mathematics courses beyond Algebra 1 and essentials for passing the state's graduation qualifying exam in mathematics. Enrollment will be contingent upon recommendation of the Algebra I or Integrated Math I teacher based on diagnostic results of performance in Algebra I and/or mathematics competency assessments. The standards for this course are aligned to the state standards that students need to master for success with the state's graduation qualifying exam in mathematics and the next level math courses. Emphasis is on a variety of instructional methods designed to meet each student's needs and delivered through competency-based units with frequent pre and post assessment data analyzed to drive instructional design and delivery. Counts as a Mathematics Course for the General Diploma only or as an Elective for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.

Recommended Prerequisites: Students who have attempted
a complete year of Algebra I,
Teacher recommendation

2 semesters, 2 credits

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

Recommended Prerequisites: Algebra II and Geometry or
Integrated Mathematics III

1 semester, 1 credit

Probability and Statistics includes the concepts and skills needed to apply statistical techniques in the decision-making process. Probability and Statistics are made up of three strands: Data Analysis, Experimental Design, and Probability. Practical examples based on real experimental data are used throughout. Students plan and conduct experiments or surveys and analyze the resulting data. The use of graphing calculators and computer programs is encouraged. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Counts as a Mathematics Course for all diplomas.

Recommended Prerequisites: Algebra II or Integrated Mathematics III 1 semester, 1 credit

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

Recommended Prerequisites: Algebra II and Geometry or 1 semester, 1 credit
Integrated Mathematics III

MULTIDISCIPLINARY

| <u>DOE Code</u> | <u>Course Title</u> | <u>Recommended Grade Level</u> | <u>Credit</u> |
|-----------------|--|------------------------------------|---------------|
| 0500 | Basic Skills | 9-12 | 2 |
| 0522 | Career Information and Exploration (JAG) | 9-10 | 2 |
| 0532 | College-Entrance Preparation (<i>semester 1</i>) | 11-12 | 1 |
| | (<i>semester 2</i>) | 10-11 | 1 |

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.

Recommended Prerequisites: None

One credit per semester up to 8 credits

Career Information and Exploration provides students with opportunities to learn about themselves and about various traditional and nontraditional occupations and careers. Students also gain an awareness of the type of occupational preparation or training needed for various occupations and careers. Students develop skills in: (1) employability, (2) understanding the economic process, and (3) career decision making and planning. Opportunities are provided for students to observe and participate in various job situations through opportunities such as field trips, internships, mock interviews, and guest speakers. Resume development experience and career-related testing are also provided to students. The nature of this course allows for successive semesters of instruction provided progressively advanced proficiencies and content standards are utilized. Counts as a Directed Elective or Elective for all diplomas

Recommended Prerequisites: Preparing for College and Careers

2 semesters, 2 credits

College Entrance Preparation 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 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. The nature of this course allows for successive semesters of instruction provided progressively advanced proficiencies and content standards are utilized. Counts as an Elective credit for all diplomas.

Recommended Prerequisite: Algebra II (or concurrent enrollment in Algebra II)

1 semester, 1 credit

RESPONSE TO INSTRUCTION

| <u>DOE Code</u> | <u>Course Title</u> | <u>Recommended Grade Level</u> | <u>Credit</u> |
|-----------------|-----------------------|------------------------------------|---------------|
| 1120 | Developmental Reading | 9-12 | 1 |
| 1010 | Language Arts Lab | 9-12 | 1 |
| 2516 | Algebra I Lab | 9-12 | 1 |
| 2560 | Mathematics Lab | 9-12 | 1 |

COURSE DESCRIPTIONS

Developmental Reading is a **supplemental** course that provides students with individualized instruction designed to support success in completing course work aligned with the Indiana Academic Standards for English/Language Arts focusing on the Reading Standards for Literature and Nonfiction. **All students should be concurrently enrolled in an English course** in which class work will address **all** of the Indiana Academic Standards. This course allows for successive semesters of instruction for students who need additional support in vocabulary development and reading comprehension. Counts as an elective for all diplomas.

Recommended Prerequisites: None

1 semester, 1 credit

Language Arts Lab is a **supplemental** course that provides students with individualized or small group instruction designed to support success in completing course work aligned with the *Indiana Academic Standards for English Language/Arts* focusing on the writing standards. **All students should be concurrently enrolled in an English course** in which class work will address **all** of the Indiana Academic Standards. This course is for students who need additional support in all the language arts (reading, writing, speaking and listening), especially in writing. This course allows for successive semesters of instruction for students who need additional support in any or all aspects of the writing standards. Counts as an Elective for all diplomas

Recommended Prerequisites: None

1 semester, 1 credit

Algebra I Lab is a mathematics support course for *Algebra I*. *Algebra I Lab* is taken while students are concurrently enrolled in Algebra 1. This course provides students with additional time to build the foundations necessary for high school math courses, while concurrently having access to rigorous, grade-level appropriate courses. The five critical areas of *Algebra I Lab* align with the critical areas of *Algebra I*: Relationships between Quantities and Reasoning with Equations; Linear and Exponential Relationships; Descriptive Statistics; Expressions and Equations; and Quadratic Functions and Modeling. However, whereas *Algebra I* contains exclusively grade-level content, *Algebra I Lab* combines standards from high school courses with foundational standards from the middle grades. Counts as a Mathematics Course for the General Diploma only or as an Elective for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas. **Algebra I Lab is designed as a support course for Algebra I. As such, a student taking Algebra I Lab must also be enrolled in Algebra I during the same academic year.**

Recommended Prerequisites: None

2 semesters, 2 credits

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

Recommended Prerequisites: None

One credit per semester up to 8 credits

SCIENCE

| <u>DOE Code</u> | <u>Course Title</u> | <u>Recommended Grade Level</u> | <u>Credit</u> |
|-----------------|--|------------------------------------|---------------|
| 3024 | Biology I | 10 | 2 |
| 3026 | Biology II, Zoology | 10-11 | 2 |
| 3020 | AP Biology | 11-12 | 2 |
| 3090 | Biology (<i>IU L100</i>) | 11-12 | 2 |
| 3064 | Chemistry I | 10-12 | 2 |
| 3066 | Chemistry II | 12 | 2 |
| 3044 | Earth and Space Science I | 9-12 | 2 |
| 3010 | Environmental Science | 11-12 | 2 |
| 3108 | Integrated Chemistry-Physics | 9-12 | 2 |
| 3084 | Physics I | 11-12 | 2 |
| 3094 | Science Tutorial | 9-12 | 2 |
| 5218 | Principles of the Biomedical Sciences | 9-12 | 2 |
| 5216 | Human Body Systems - Biomed II. PLTW (<i>Ivy Tech PLTW</i>) | 10-12 | 2 |
| 5217 | Medical Intervention - Biomed III, PLTW | 11-12 | 2 |
| 5219 | Biomedical Innovation - Biomed IV, PLTW (<i>Ivy Tech PLTW BIOT 107</i>) | 12 | 2 |

COURSE DESCRIPTIONS

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

Recommended Prerequisites: None

2 semesters, 2 credits

Biology II, Zoology is an advanced laboratory, field, and literature investigations-based course. Students enrolled in Biology II examine in greater depth the structures, functions, and processes of living organisms. Students also analyze and describe the relationship of Earth's living organisms to each other and to the environment in which they live. In this course, students refine their scientific inquiry skills as they collaboratively and independently apply their knowledge of the unifying themes of biology to biological questions and problems related to personal and community issues in the life sciences. Counts as a Science Requirement for the Certificate of Completion. Fulfills the Biology requirement for the all diplomas.

Recommended Prerequisites: Biology I

2 semesters, 2 credits

Biology Humans and the Biological World (IU L100) - Principles of biological organization, from molecules through cells and organisms to populations. Emphasis on processes common to all organisms, with special reference to humans.

Recommended Prerequisites: Biology and one physical science course, 1 semester, 1 credit
Preferably Chemistry

AP Biology is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. The major themes of the course include: The process of evolution drives the diversity and unity of life, Biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis, Living systems store, retrieve, transmit and respond to information essential to life processes, Biological systems interact, and these systems and their interactions possess complex properties. Counts as a Science Course for all diplomas. Qualifies as a quantitative reasoning course

Recommended Prerequisites: Biology I and Chemistry I 2 semesters, 2 credits

Chemistry I is a course based on the following core topics: properties and states of matter; atomic structure and the Periodic Table; bonding and molecular structure; reactions and stoichiometry; behavior of gases; thermochemistry; solutions; acids and bases. Students enrolled in Chemistry I compare, contrast, and synthesize useful models of the structure and properties of matter and the mechanisms of its interactions. Instruction should focus on developing student understanding that scientific knowledge is gained from observation of natural phenomena and experimentation by designing and conducting investigations guided by theory and by evaluating and communicating the results of those investigations according to accepted procedures. Counts as a Science Requirement for the Certificate of Completion. Fulfills the Biology requirement for the all diplomas. Qualifies as a Quantitative Reasoning course for the Class of 2016 and beyond.

Recommended Prerequisites: Algebra 2 (may be taken concurrently) 2 semesters, 2 credits

Chemistry II is an extended laboratory, field, and literature investigations-based course. Students enrolled in Chemistry II examine the chemical reactions of matter in living and nonliving materials. Based on the unifying themes of chemistry and the application of physical and mathematical models of the interactions of matter, students use the methods of scientific inquiry to answer chemical questions and solve problems concerning personal needs and community issues related to chemistry. Counts as a Science Requirement for the Certificate of Completion. Fulfills the Biology requirement for the all diplomas. Qualifies as a Quantitative Reasoning course.

Recommended Prerequisite: Chemistry I and Algebra II 2 semesters, 2 credits

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

Recommended Prerequisite: None 2 semesters, 2 credits

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

Recommended Prerequisite: Two credits in science courses 2 semesters, 2 credits

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

Recommended Prerequisites: Algebra I (may be taken concurrently) 2 semesters, 2 credits

Physics I is a course focused on the following core topics: constant velocity; constant acceleration; forces; energy; linear momentum in one dimension; simple harmonic oscillating systems; mechanical waves and sound; simple circuit analysis. Instruction should focus on developing student understanding that scientific knowledge is gained from observation of natural phenomena and experimentation by designing and conducting investigations guided by theory and by evaluating and communicating the results of those investigations according to accepted procedures. Counts as an Elective for all diplomas. Fulfills a science (physical) course requirement for all diplomas. Qualifies as a Quantitative Reasoning course.

Recommended Prerequisites: Algebra I or II 2 semesters, 2 credits
Current enrollment in Pre-Calculus is recommended

Science Tutorial provides students with individualized instruction designed to support success in completing Core 40 science coursework for each year that they are enrolled in Core 40 science courses. Counts as an Elective for all diplomas.

Recommended Prerequisite: Must be taken concurrently with a 2 semesters, 2 credits
Core 40 science course

PLTW Principles of Biomedical Sciences provides an introduction to this field through "hands-on" projects and problems. Student work involves the study of human medicine, research processes and an introduction to bioinformatics. Students investigate the human body systems and various health conditions including heart disease, diabetes, hypercholesterolemia, and infectious diseases. A theme through the course is to determine the factors that led to the death of a fictional person. After determining the factors responsible for the death, the students investigate lifestyle choices and medical treatments that might have prolonged the person's life. Key biological concepts included in the curriculum are: homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease. Engineering principles such as the design process, feedback loops, fluid dynamics, and the relationship of structure to function will be included where

appropriate. The course is designed to provide an overview of all courses in the Biomedical Sciences program and to lay the scientific foundation necessary for student success in the subsequent courses. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Core 40 Science requirement for all diploma types.

Required Prerequisite: Biology I or concurrent enrollment in Biology I 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. Counts as a Directed Elective or Elective for all diplomas.

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

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. Lessons will cover the history of organ transplants and gene therapy with additional readings from current scientific literature addressing cutting edge developments. Counts as a Directed Elective or Elective for all diplomas. Fulfills a Core 40 Science requirement for all diploma types.

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

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

Required Prerequisites: PLTW Principles of the Biomedical Sciences, PLTW Human Body Systems, and PLTW Medical Intervention , “C” or higher in Biomed 3 2 semesters, 2 credits

SOCIAL STUDIES

| <u>DOE Code</u> | <u>Course Title</u> | <u>Recommended</u> | |
|-----------------|--|--------------------|---------------|
| | | <u>Grade Level</u> | <u>Credit</u> |
| 1512 | Current Problems, Issues, and Events | 9-12 | 1 |
| 1516 | Ethnic Studies | 9-12 | 1 |
| 1570 | Geography and History of the World | 9-12 | 2 |
| 1518 | Indiana Studies | 9-12 | 1 |
| 1532 | Psychology | 11-12 | 1 |
| 1534 | Sociology | 11-12 | 1 |
| 1548 | World History and Civilization | 9-12 | 2 |
| 1542 | United States History | 11 | 2 |
| 1562 | AP United States History | 11 | 2 |
| 1514 | Economics | 11-12 | 1 |
| 1540 | United States Government | 11-12 | 1 |
| 1560 | AP United States Government and Politics | 11-12 | 2 |

COURSE DESCRIPTIONS

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

Recommended Prerequisites: None

1 semester, 1 credit

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

Recommended Prerequisites: None

1 semester, 1 credit

Geography and History of the World is designed to enable students to use geographical tools, skills and historical concepts to deepen their understanding of major global themes including the origin and spread of world religions; exploration; conquest, and imperialism; urbanization; and innovations and revolutions. Geographical and historical skills include forming research questions, acquiring information by investigating a variety of primary and secondary sources, organizing information by creating graphic representations, analyzing information to determine and explain patterns and trends, planning for the future, and documenting and presenting findings orally or in writing. The historical geography concepts used to explore the global themes include change over time, origin, diffusion, physical systems, cultural landscapes, and

spatial distribution/patterns and interaction/relationships. Students use the knowledge, tools, and skills obtained from this course in order to analyze, evaluate, and make predictions about major global developments. This course is designed to nurture perceptive and responsible citizenship, to encourage and support the development of critical thinking skills and lifelong learning, and to help prepare Indiana students for the 21st Century. Counts as a Social Studies requirement for the General Diploma. Counts as an Elective for all diplomas. Fulfills the Geography History of the World/World History and Civilization graduation requirement for all diplomas.

Recommended Prerequisites: None

2 semesters, 2 credits

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

Recommended Prerequisites: None

1 semester, 1 credit

Psychology is the scientific study of mental processes and behavior. The course is divided into eight content areas. History & Scientific Method explores the history of psychology, the research methods used, and the ethical considerations that must be utilized. Biological Basis for Behavior focuses on the way the brain and nervous system function, including sensation, perception, motivation and emotion. Development looks at all the changes through one's life; physical, cognitive, as well as emotional, social and moral development. Cognition focuses on learning, memory, information processing, and language development. Personality and Assessment looks at the approaches used to explain one's personality and the assessment tools used. Abnormal Psychology explores psychological disorders and the various treatments used for them. Socio-Cultural Dimensions of Behavior covers topics such as conformity, obedience, perceptions, attitudes and influence of the group on the individual. Psychological Thinking explores how to think like a psychologist and expand critical thinking skills needed in the day-to-day life of a psychologist. Counts as an Elective for all diplomas

Recommended Prerequisites: None

1 semester, 1 credit

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

Recommended Prerequisites: None

1 semester, 1 credit

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

Recommended Prerequisites: None

2 semesters, 2 credits

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

Recommended Prerequisites: None

2 semesters, 2 credits

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

Recommended Prerequisites: None

2 semesters, 2 credits

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

role of government; national economic performance; the role of financial institutions; economic stabilization; and trade. Fulfills the Economics requirement for all diplomas. Qualifies as a Quantitative Reasoning course.

Recommended Prerequisites: None

1 semester, 1 credit

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

Recommended Prerequisites: None

1 semester, 1 credit

AP United States Government and Politics is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. AP United States Government and Politics introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning assess causes and consequences of political events, and interpret data to develop evidence-based arguments. Topics include: (1) constitutional underpinnings, (2) political beliefs and behaviors, (3) political parties, interest groups, and mass media, (4) institutions of national government, (5) public policy, and (6) civil rights and civil liberties. Fulfills the Government requirement for all diplomas. 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.

Recommended Prerequisites: None

2 semesters, 2 credits

Students should be able to read a college level textbook and write grammatically correct, complete sentences.

TECHNOLOGY EDUCATION

| <u>DOE Code</u> | <u>Course Title</u> | <u>Recommended Grade Level</u> | <u>Credit</u> |
|-----------------|---|------------------------------------|---------------|
| 5608 | Adv. Manufacturing I (<i>fall</i>) | 10-11 | 1 |
| 5606 | Adv. Manufacturing II (<i>spring</i>) | 10-11 | 1 |
| 4816 | Aerospace Engineering PLTW | 11-12 | 2 |
| 4820 | Civil Engineering and Architecture PLTW (<i>Ivy Tech DESN 105</i>) | 10-12 | 2 |
| 4810 | Computer Integrated Manufacturing PLTW | 10-12 | 2 |
| 4568 | AP Computer Science Principles | 10-12 | 2 |
| 4570 | AP Computer Science A | 11-12 | 2 |
| 4790 | Introduction to Communications | 9 | 2 |
| 4812 | Introduction to Engineering Design PLTW (<i>Ivy Tech DESN 101</i>) | 9-12 | 2 |
| 4794 | Introduction to Design Processes | 10 | 2 |
| 4828 | Engineering Design and Development PLTW | 11-12 | 2 |
| 4814 | Principles of Engineering PLTW (<i>Ivy Tech DESN 104</i>) | 9-12 | 2 |
| 4808 | Technology Systems, PLTW | 9-12 | 1 |

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.

Recommended Prerequisites: Completion of two Project Lead the Way courses (IED and POE) 2 semesters, 2 credits

Civil Engineering and Architecture PLTW (*Ivy Tech DESN 105*)- This course introduces students to the fundamental design and development aspects of civil engineering and architectural planning activities. Application and design principles will be used in conjunction with mathematical and scientific knowledge. Computer software programs should allow students opportunities to design, simulate, and evaluate the construction of buildings and communities. During the planning and design phases, instructional emphasis should be placed on related transportation, water resource, and environmental issues. Activities should include the preparation of cost estimates as well as a review of regulatory procedures that would affect the project design.

Recommended 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.

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

AP Computer Science Principles course will introduce you to the essential ideas of computer science and show how computing and technology can influence the world around you. Students will creatively address real-world issues and concerns while using the same processes and tools as artists, writers, computer scientists, and engineers to bring ideas to life. The course is not intended to be used as a dual credit course. Counts as a **Math Course** for all diplomas.

Recommended Prerequisite: Algebra I 2 semesters, 2 credits

AP Computer Science A is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. AP Computer Science A is equivalent to a first semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The curriculum for AP Computer Science A is compatible with many CS1 courses in colleges and universities. Counts as a **Mathematics** or Elective for all diplomas. Qualifies as a quantitative reasoning course

Recommended Prerequisites: Digital Citizenship, Algebra I, and Algebra II 2 semesters, 2 credits

Engineering Design and Development PLTW is an engineering research course in which students work in teams to research, design, test, and construct a solution to an open-ended engineering problem. The product development life cycle and a design process are used to guide the team to reach a solution to the problem. The team/ and or individuals communicates their solution to a panel of stakeholders at the conclusion of the course. As the capstone course in the Engineering Pathway, EDD engages students in critical thinking, problem-solving, time management, and teamwork skills. Counts as a Directed Elective or Elective for all diplomas. Qualifies as a quantitative reasoning course.

Recommended Prerequisites: Intro to Engineering Design, Principles of Engineering Design, and one Pre-engineering Specialty Course 2 semesters, 2 credits

Introduction to Communications is a course designed to provide a foundational knowledge of identifying and using modern communication to exchange messages and information. This course explores the application of the tools, materials, and techniques used to design, produce, use, and assess systems of communication. Students will produce graphic and electronic media as they apply communication technologies. This course will also explore the various technical

processes used to link ideas and people through the use of electronic and graphic media. Major goals of this course include an overview of communication technology; the way it has evolved, how messages are designed and produced, and how people may profit from creating information services and products. Students will explore mass media communication processes including radio and television broadcasting, publishing and printing activities, telecommunication networks, recording services, computer and data processing networks, and other related systems. Using the base knowledge student will use the design process to solve design projects in each communication area. Counts as a Directed Elective or Elective for all diplomas.

Recommended Prerequisites: None

2 semesters, 2 credits

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

Recommended Prerequisites: None

2 semesters, 2 credits

Introduction to Engineering Design PLTW (Ivy Tech DESN 102) is a fundamental pre-engineering course where students become familiar with the engineering design process. Students work both individually and in teams to design solutions to a variety of problems using industry standard sketches and current 3D design and modeling software to represent and communicate solutions. Students apply their knowledge through hands-on projects and document their work with the use of an engineering notebook. Students progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Ethical issues related to professional practice and product development are also presented. Counts as a Directed Elective or Elective for all diplomas.

Recommended Prerequisites: None

2 semesters, 2 credits

Principles of Engineering PLTW (Ivy Tech DESN 104) is a course that focuses on the process of applying engineering, technological, scientific and mathematical principles in the design, production, and operation of products, structures, and systems. This is a hands-on course designed to provide students interested in engineering careers to explore experiences related to specialized fields such as civil, mechanical, and materials engineering. Students will engage in research, development, planning, design, production, and project management to simulate a career in engineering. The topics of ethics and the impacts of engineering decisions are also addressed. Classroom activities are organized to allow students to work in teams and use modern technological processes, computers, CAD software, and production systems in developing and presenting solutions to engineering problems. Counts as a Directed Elective or Elective for all diplomas. Qualifies as a quantitative reasoning course.

Recommended Prerequisites: Intro to Engineering Design PLTW

2 semesters, 2 credits

Technology Systems PLTW is a course that focuses on the technologies used in the career pathways related to Architecture & Construction, Arts, A/V Technology & Communications, Manufacturing, Science, Technology, Engineering & Mathematics and the Transportation, Distribution, & Logistics career clusters. Instructional strategies include creative problem solving activities that address real-world problems and opportunities. Computer experiences are used to incorporate graphics, simulations, networking, and control systems. Students are also introduced to, and engaged in, investigating career opportunities within a career cluster of their choice. Systems thinking skills are used by students to study, diagram, and test a solution to a scenario related to their career interests. . Counts as a Directed Elective or Elective for all diplomas.

Recommended Prerequisites: None

1 semester, 1 credit

THE INTEGRATED TECHNOLOGY EDUCATION PROGRAM (ITEP) IS A CAREER PATHWAY PROGRAM IN INDUSTRIAL TECHNOLOGY OFFERED THROUGH IVY TECH COMMUNITY COLLEGE TO EXPAND OPPORTUNITIES FOR HIGH SCHOOL STUDENTS TO GAIN INDUSTRY SKILLS AND VALUABLE CREDENTIALS.

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

Recommended Prerequisites: None

1 semester, 1 credit

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

Required Prerequisites: Advanced Manufacturing I

1 semester, 1 credit

- _____ CORE 40 DIPLOMA
- _____ CORE 40 WITH ACADEMIC HONORS
- _____ CORE 40 WITH TECHNICAL HONORS

Name _____

ROCHESTER HIGH SCHOOL Four Year Plan

SUMMER SCHOOL: PE / Health
(circle one if interested)

FRESHMAN

1. English 9
2. Intro to Communications
3. Biology 1
4. Algebra 1 or Geometry (circle one)
5. _____
6. _____
7. _____

SUMMER SCHOOL: _____

SOPHOMORE

1. English 10
2. World History
3. Geometry or Algebra II (circle one)
4. Science
5. _____
6. _____
7. _____

SUMMER SCHOOL: _____

JUNIOR

1. English 11
2. U.S. History
3. Algebra II or PreCal/Trig (circle one)
4. Science
5. _____
6. _____
7. _____

SUMMER SCHOOL: _____

SENIOR

1. Government/Economics
2. English 12
3. Math or QR
4. _____
5. _____
6. _____
7. _____

 Student Signature

 Parent Signature

Date _____

CAREER AND POST SECONDARY INTEREST

