South Newton High School

Kentland, Indiana

Academic Course Description Guide
2018-2019
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Approved by the South Newton Board of School Trustees
Academic Expectations for Students at South Newton High School

1. Students determine possible career objectives in eighth grade to guide the scheduling process.
2. All students at SNHS complete a 4-Year Plan that aligns with the students’ possible career objective.
3. Students are encouraged to complete a course in mathematics each year of their high school career.
4. Students are encouraged to make college financial plans early in the high school career. Seniors are encouraged to file the FAFSA during their senior year.
5. Students may not move on to another level of math unless they receive a C- or better.
6. Students may only take one level of English at a time.
7. Career clusters are available in the agriculture curriculum.
8. Summer school offerings may be available for credit.
9. Accommodations are made for students with individualized educational plans.

Indian Trails Area Career Center

Students from South Newton High School are eligible to participate in certain vocational courses offered at other area schools under the direction of the Indian Trails Co-Op. These opportunities expand the course selections available to students and will enable them to receive career and technical training in the area that matches their career plan. The member schools offer different courses. These programs focus on career skills and could be an important part of a student’s career plan. These programs, including travel time, could consume approximately one-half of the school day. Students attending the high school offering the class will receive the first opportunity to participate in courses offered at their own schools. Please contact the guidance office for further details regarding course opportunities, transportation, certification, and participation.

Dual Credit Courses

Students can receive college credit for successful completion of courses. Students must successfully complete the course work at South Newton and meet the required score on an exit exam. Credit for these courses will be given through participating universities.

Advanced Placement (AP) Courses

AP courses are available for students to take in high school. These are college level courses that include and require an AP Exam at the completion of the course which gives students’ the opportunity to earn college credit.
Required Courses
Every student should take seven classes each semester for credit unless they have an IEP. A student may receive credit for a class only once unless it is repeatable such as SAE, Adv.3D, DDII, Chorus and Band. One full credit shall consist of five classroom periods per week for one semester.
Additional preparation outside the classroom may be necessary for course completion.
Any student auditing a course will not receive a grade or credit.
Students are required to pass the ISTEP as part of the graduation requirement.
Each student must be enrolled in high school for eight semesters, however, seniors who have completed all requirements by the end of their 7th semester, may qualify for early graduation according to board policy.
Required courses are arranged below.

<table>
<thead>
<tr>
<th>Grade 9</th>
<th>Grade 10</th>
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<tbody>
<tr>
<td>English 9</td>
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<td>Science</td>
<td>Math</td>
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<tr>
<td>Math</td>
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<tr>
<td>World History &amp; Civilization</td>
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<table>
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<tr>
<th>Grade 11</th>
<th>Grade 12</th>
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<tbody>
<tr>
<td>English 11</td>
<td>English 12</td>
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<tr>
<td>U.S. History</td>
<td>U.S. Government/Econ.</td>
</tr>
<tr>
<td>Math</td>
<td>Quantitative Reasoning Course (Math)</td>
</tr>
<tr>
<td>Science</td>
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</tbody>
</table>

South Newton High School requires 42 credits to receive a diploma. There are different diplomas available, depending on courses taken and the level of success earned. The following chart shows what is needed to achieve each of these. However, 42 credits are needed for each at South Newton High School.
### Course and Credit Requirements

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
<th>Requirements</th>
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<tbody>
<tr>
<td><strong>English/Language Arts</strong></td>
<td>8 credits</td>
<td>Include literature, composition and speech</td>
</tr>
</tbody>
</table>
| **Mathematics**                 | 6 credits (in grades 9-12) | 2 credits: Algebra I  
2 credits: Geometry  
2 credits: Algebra II  
Students must take a math or quantitative reasoning course each year in high school |
| **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/Technical |
| **Physical Education**          | 2 credits |                                                                            |
| **Health and Wellness**         | 1 credit |                                                                            |
| **Electives**                   | 6 credits | (College and Career Pathway courses recommended)                             |

**40 Total State Credits Required**

*South Newton requires 42 credits to receive a diploma*
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.
- Earn 2 Core 40 fine arts credits.
- Earn a grade of “C” or above in courses that will count toward the diploma.
- Have a grade point average of “B” or above.
- Complete one of the following:
  A. Earn 4 credits in 2 or more AP courses and take corresponding AP exams,
  B. Earn 6 verifiable transcripted college credits in dual credit courses from priority course list
  C. Earn 2 of the following:
     1. A minimum of 3 verifiable transcripted college credits from the priority course list,
     2. 2 credits in AP courses and corresponding AP exams,
     3. 2 credits in IB standard level courses and corresponding IB exams.
  D. Earn a combined score of 1750 or higher on the SAT critical reading, mathematics and writing
     Sections and a minimum score of 530 on each
  E. Earn an ACT composite score of 26 or higher and complete written section
  F. Earn 4 credits in IB courses and take corresponding IB exams.

*SAT requirements will be modified with the addition of the writing section.

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 and Career Pathway and one of the following:
  1. Pathway designated industry-based certification or credential, or
  2. Pathway dual credits from the lists of priority courses resulting in 6 transcripted college credits
- Earn a grade of “C” or above in courses that will count toward the diploma.
- Have a grade point average of “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. A state approved industry recognized certification**

***To receive an HONORS diploma from SNHS, students must earn 48 credits!***
• **Challenging Courses = Big Rewards.** Students who take strong academic courses in high school are more likely to enroll in college and earn a degree. That’s important, because higher education pays: On average, college graduates earn more than a million dollars more over a lifetime than those with only a high school education. High school graduates earn 42 percent more than high school dropouts. Core 40 pays.

• **More Career Options.** Good jobs require education beyond high school. That means if you want a job that will support you and your future family, provide health benefits and offer a chance for advancement, you’ll need to complete a two- or four-year degree, apprenticeship program, military training, or workforce certification. If you are planning to go directly to work after high school graduation, you will still need to be prepared for training and retooling throughout your lifetime. Core 40 gives you more options — and more opportunities — to find a career with a real future.

• **What Employers and Training Programs Want.** Employers, apprenticeship programs and the military all agree — they expect you to arrive with essential skills, including speaking and writing clearly, analyzing information, conducting research, and solving complex problems. The expectations are the same: You need Core 40.

**Preparation for College Success.** It’s not just about getting in — it’s about finishing. To succeed in college-level work, students need to complete Core 40 in high school. Anything less may mean taking remedial (high school) coursework in college, which means it will take you longer to finish and will cost you more in college tuition. It also means you’ll have a greater chance of dropping out before you get your degree. That’s why Core 40 is a college admissions requirement: In fall 2011 you won’t be able to start at a four-year public Indiana college without Core 40 (or a documented equivalent). Most private colleges require students to have at least this level of high school academic preparation. Core 40 is your best preparation for success.

• **Money for College.** The Core 40 diploma can help you earn money for college. Indiana students who complete a Core 40 diploma and meet other financial aid and grade requirements can receive up to 90 percent of approved tuition and fees at eligible colleges. Core 40 with Academic Honors graduates can receive up to 100 percent and some colleges also offer their own scholarships specifically for students who earn this diploma.

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**Succeeding With Core 40**

Students entering high school will be expected to complete Core 40 as a graduation requirement.

By providing all Indiana students a balanced sequence of academically rigorous high school courses in the core subjects of English/language arts, mathematics, science and social studies; physical education/health and wellness; and electives including world languages, career/technical, and fine arts, the Core 40 requirement gives all our students the opportunity to compete with the best. That’s great news for Indiana students.

For more information about Core 40 and your career and course plan, see your counselor and visit Learn More Resource Center at www.learnmoreindiana.org.
Indiana General High School Diploma

The completion of Core 40 is an Indiana graduation requirement. Indiana’s Core 40 curriculum provides the academic foundation all students need to succeed in college and the workforce.

To graduate with less than Core 40, the following formal opt-out process must be completed:

- The student, the student’s parent/guardian, and the student’s counselor (or another staff member who assists students in course selection) must meet to discuss the student’s progress.
- The student’s Graduation Plan (including four year course plan) is reviewed.
- The student’s parent/guardian determines whether the student will achieve greater educational benefits by completing the general curriculum or the Core 40 curriculum.
- If the decision is made to opt-out of Core 40, the student is required to complete the course and credit requirements for a general diploma and the career/academic sequence the student will pursue is determined.

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

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<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
<th>Requirements</th>
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</thead>
<tbody>
<tr>
<td>English/Language Arts</td>
<td>8 credits</td>
<td>Credits must include literature, composition and speech</td>
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</tbody>
</table>
| Mathematics              | 4 credits | 2 credits: Algebra I or Integrated Mathematics I  
2 credits: Any math course  
*General diploma students are required to earn 2 credits in a Math or a Quantitative Reasoning (QR) course during their junior or senior year. QR courses do not count as math credits.* |
| Science                  | 4 credits | 2 credits: Biology I  
2 credits: Any science course  
*At least one credit must be from a Physical Science or Earth and Space Science course* |
| Social Studies           | 4 credits | 2 credits: U.S. History  
1 credit: U.S. Government  
1 credit: Any social studies course |
| Physical Education       | 2 credits |                                   |
| Health and Wellness      | 1 credit  |                                   |
| College and Career Pathway Courses | 6 credits | Selecting electives in a deliberate manner to take full advantage of college and career exploration and preparation opportunities |
| Flex Credit              | 5 credits | Flex Credits must come from one of the following:  
- Additional elective courses in a College and Career Pathway  
- Courses involving workplace learning such as Cooperative Education or Internship courses  
- High school/college dual credit courses  
- Additional courses in Language Arts, Social Studies, Mathematics, Science, World Languages or Fine Arts |
| Electives                | 6 credits | Specifies the minimum number of electives required by the state. High school schedules provide time for many more elective credits during the high school years. |
LANGUAGE ARTS

English 9
2 Semesters
2 Credits
Description: A required two-term course for students. An integrated English course based on Indiana’s Academic Standards for English/Language Arts in Grade 9 and the Common Core State Standards for English/Language Arts, is a study of language, literature, composition, and oral communication with a focus on exploring a wide-variety of genres and their elements. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to literature balanced with nonfiction. Students write short stories, responses to literature, expository and persuasive compositions, research reports, business letters, and technical documents. Students deliver grade-appropriate oral presentations and access, analyze, and evaluate online information.

English 9 Honors*
2 Semesters
2 Credits
Prerequisite: No less than an A- average in English 9 or consent of instructor.
Description: A required two-semester course of intensive study for 9th graders. Principle goals of the course are (1) to develop an appreciation of the genres and authors in literature; (2) to foster analytical skills by using both literature and composition; (3) to promote better written and spoken usage of the language; and (4) to increase vocabulary. Honors students will write, discuss, and read at a more advanced level and focus on a specific unifying theme.

English 10
2 Semesters
2 Credits
Prerequisite: Successful completion of English 9.
Description: A required two-term course. An integrated English course based on Indiana’s Academic Standards for English/Language Arts in Grade 10 and the Common Core State Standards for English/Language Arts, is a study of language, literature, composition, and oral communication with a focus on exploring universal themes across a wide variety of genres. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to literature balanced with nonfiction. Students write short stories, responses to literature, expository and persuasive compositions, research reports, business letters, and technical documents. Students deliver grade-appropriate oral presentations and access, analyze, and evaluate online information.

English 10 Honors*
2 Semesters
2 Credits
Prerequisite: No less than an A average in English 9 or consent of instructor.
Description: A required two-semester course of intensive study for 10th graders. Principle goals of the course are (1) to develop an appreciation of the genres and authors in literature; (2) to foster analytical skills by using both literature and composition; (3) to promote better written and spoken usage of the language; and (4) to increase vocabulary. Honors students will write, discuss, and read at a more advanced level and focus on a specific unifying theme.

*English 9 & 10 Honors classes are taught together over a two year period. Meaning 9th & 10th grade students will be mixed together.
English 11
2 Semesters
2 Credits
Prerequisites: Successful completion of English 9 and 10
Description: An integrated English course based on Indiana’s Academic Standards for English/Language Arts in Grade 11 and the Common Core State Standards for English/Language Arts, is a study of language, literature, composition, and oral communication with a focus on exploring universal themes and a wide variety of genres. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance appropriate for grade 11 in classic and contemporary literature balanced with nonfiction. Students write fictional narratives, short stories, responses to literature, reflective compositions, historical investigation reports, resumes, and technical documents incorporating visual information in the form of pictures, graphs and tables. Students write and deliver grade-appropriate multimedia presentations and access, analyze, and evaluate online information.

English Lang & Comp AP
Dual Credit-Ivy Tech ENG 111 English Composition (3 credits)
2 Semesters
2 Credits
Prerequisites: Successful completion of English 9 and English 10 Honors or consent of the instructor.
Description: An advanced placement course based on content established by the College Board. An AP course in English Language and Composition engages students in becoming skilled readers of prose written in a variety of rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes. Both their writing and their reading should make students aware of the interactions among a writer’s purposes, audience expectations, and subjects as well as the way generic conventions and the resources of the language contribute to effectiveness in writing.
*Dual Credit is available through Ivy Tech for those students who meet the pre-requisites.

English Lit & Comp AP
Dual Credit-Ivy Tech ENG 206 Introduction to Literature (3 credits)
2 Semesters
2 Credits
Prerequisites: Successful completion of English 9 and English 10 Honors, and English Lang/Comp AP
Description: An advanced placement course based on content established by the College Board. An AP English course in Literature and Composition engages students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students consider a work’s structure, style, and themes as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. The course includes intensive study of representative works from various genres and periods, concentrating on works of recognized literary merit.
*Dual Credit is available through Ivy Tech for those students who meet the pre-requisites.
*English Language and English Literature & Composition AP courses are taught together over a two year period. Meaning 11th & 12th grade students will be mixed together.

English 12
2 Semesters
2 Credits
Prerequisite: Successful completion of English 9, 10, 11 or English Lang/Comp AP
Description: An integrated English course based on Indiana’s Academic Standards for English/Language Arts in Grade 12 and the Common Core State Standards for English/Language Arts, is a study of language, literature, composition, and oral communication focusing on an exploration 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 appropriate for grade 12 in classic and contemporary literature balanced with nonfiction. Students write fictional narratives, short stories, responses to literature, reflective compositions, historical investigation reports, resumes, and technical documents incorporating visual information in the form of pictures, graphs and tables. Students write and deliver grade-appropriate multimedia presentations and access, analyze, and evaluate online information.

**English as a New Language (ENL)**  
Grades 9-12  
4 Semesters (maximum)  
1 Credit per semester (maximum of 4)  
**Prerequisite:** First or native language must be something other than English. Student should be at a limited English proficient level of 1, 2, 3 or 4. English proficiency placement test results  
**Description:** English as New Language, an integrated English course based on Indiana’s language Proficiency (ELP) Standards, is the study of language, literature, composition and oral communication for Limited English Proficient (LEP) students so that they improve their proficiency in listening, speaking, reading, writing and comprehension of Standard English. Students study English vocabulary used in fictional texts and content-area texts, speak and write English so that they can function within the regular school setting and an English-speaking society, and deliver oral presentations appropriate to their respective levels of English proficiency.

Recommended Grade Level: The intent of the ENL course is to move students as successfully, smoothly, and rapidly as possible into the Core 40 English courses offered in grades 9-12.

English/Language Arts credit (1012): If ENL course work addresses Indiana’s Academic Standards for English/Language Arts, up to four (4) credits accrued can be counted as part of the eight (8) required English/Language Arts credits for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.

World Language Credit (2188): If ENL course work addresses Indiana’s Academic Standards for World Languages and is taking concurrently with another English/Language Arts course, up to four (4) credits accrued may count as World Language credits for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.

**World Languages**

**Spanish I**  
Grades 9-12  
2 Semesters  
2 Credits  
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 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 the classroom.
Spanish II
2 semesters
2 credits
Prerequisite: Spanish I
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 the content areas and the application of understanding Spanish language and culture outside of the classroom.

Spanish III
2 Semesters
2 Credits
Prerequisites: Spanish I and II
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; 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.

Spanish IV
2 semesters
2 credits
Prerequisites: Spanish I, II, III
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.

**MATHEMATICS**

**Algebra I**

Grades 9-12

2 Semesters

2 Credits

*Description:* Algebra I formalizes and extends the mathematics students learned in the middle grades. Five critical areas comprise Algebra I: Relations and Functions; Linear Equations and Inequalities; Quadratic and Nonlinear Equations; Systems of Equations and Inequalities; and Polynomial Expressions. The 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 Mathematical Practice Standards apply throughout each course and, together with content standards, prescribe that students experience mathematics and a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**Algebra I Lab**

Grades 9-10

2 Semesters

2 Credits

Counts as a Mathematics Course for the General Diploma only. Elective course for Core 40, Core 40 with Academic Honors and Core 40 Technical Honors diplomas.

**Must be enrolled in Algebra I.**

*Prerequisite:* None

*Description:* Algebra I Lab is a mathematics support course for Algebra I. The course provides students with additional time to build the foundations necessary for high school math courses, while concurrently having access to rigorous, grade-level appropriate courses. The five critical areas of Algebra 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.

**Math 10**

Grades 9-10

2 Semesters

2 Credits

Counts as a Mathematics Course for the General Diploma only. Elective course for Core 40, Core 40 with Academic Honors and Core 40 Technical Honors diplomas.

*Prerequisite:* Completed Algebra I or attempted to complete a year of Algebra I

*Description:* A new two-semester course designed to reinforce and evaluate the Algebra I and 7th & 8th grade geometry knowledge and skills necessary for students to successfully complete high school mathematics courses beyond Algebra I and essentials for passing the state’s graduation qualifying exam in mathematics (ISTEP). Enrollment will be contingent upon recommendation of the Algebra 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 (ISTEP) and the next level math courses. Emphasis is on the variety of instructional methods designed to meet each student’s needs and delivered through competency-based units with frequency pre and post assessment data analyzed to drive instructional design and delivery.
Geometry  
Grades 9-12  
2 Semesters  
2 Credits  
*Prerequisite:* C- or better in Algebra I  
*Description:* 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. Six critical areas comprise the Geometry course: Congruency and Similarity; Measurement; Analytic Geometry; Circles; and Polyhedra. Close attention should be paid to the introductory content for the Geometry conceptual category found in the high school INCC The Mathematical Practice Standards apply throughout each course and, together with the content 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.

Algebra II  
Grades 10-12  
2 Semesters  
2 Credits  
*Prerequisite:* C- or better in Algebra I. Students choosing to take Algebra II and Geometry simultaneously may do so based only on the recommendation of previous mathematics teachers.  
*Description:* 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. The Mathematical Practice Standards apply throughout each course and together with the content 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.

Finite Mathematics  
Grade 11-12  
2 Semesters  
2 Credits  
*Recommended Pre-requisite:* Algebra II  
*Description:* Finite math is an umbrella of mathematical topics. It is a course designed for students who will undertake higher –level mathematics in college that may not include calculus. Topics include: Sets, matrices, Networks, Optimization, and Probability. Technology, such as computers and graphing calculators, should be used frequently. The process Standards for mathematics apply throughout each course and, together with the content 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.

Pre-Calculus/Trigonometry  
Grades 11-12  
Dual Credit-Ivy Tech  
Math 136 Pre-Calculus (3 credits) & Math 137 Trigonometry (3 credits)  
2 Semesters  
2 Credits  
*Prerequisite:* A grade of C- or higher in Algebra II or teacher recommendation.  
*Description:* A two-credit course that combines the material from Trigonometry and Pre-Calculus into one course. The foundations of algebra and functions developed in previous courses will be extended 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. 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.

*Dual Credit is available through Ivy Tech for those students who meet the pre-requisites.

**Calculus AB, AP**
Grade 12
2 Semesters
2 Credits

*Prerequisite:* A grade of B or higher in Pre-Calculus

*Description:* Calculus AB, Advanced Placement is a course based on content established by the College Board. Calculus AB is primarily concerned with developing the student’s understanding of the concepts of calculus and providing experience with its methods and applications. The course emphasizes a multi-representational approach to calculus, with concept results, and problems being expressed graphically, numerically, analytically, and verbally. The connections among these representations are also important. Topics include: (1) functions, graphs, and limits; (2) derivatives; and (3) integrals. Technology should be used regularly by students and teachers to reinforce the relationships among the multiple representations of functions, to confirm written work, to implement experimentation, and to assist in interpreting results.

**Mathematics Lab**
Grades 10-12
2 Semesters
2 Credits

*Prerequisite:* Below standard scores on ECA/ISTEP and/or teacher recommendation

*Description:* Mathematics Lab provides students with individualized instruction designed to support success in completing mathematics coursework aligned with Indiana’s Academic Standards for Mathematics. It is recommended that Mathematics Lab be taken in conjunction with a Core 40 mathematics course, and the content of Mathematics Lab should be tightly aligned to the contents of its corresponding course. Mathematics Lab should not be offered in conjunction with Algebra I; instead schools should offer Algebra Enrichment to provide students with rigorous support for this course.

**SCIENCE DEPARTMENT**

**Biology I**
Grade 9-10
2 Terms
2 Credits

*Prerequisite:* None

*Description:* This first-year biology course fulfills the state and local biology graduation requirement and is a Core 40 course. A thematic approach is taken to the study of the structures and functions of living things and their interactions with their environment. The content is organized into eight major units or themes: 1) Nature of Science, 2) Cell Structure and Function, 3) Genetics, 4) Evolution, 5) Diversity of Life, 6) Ecology, 7) Biotechnology, and 8) Intro to Biochemistry. Evolution is stressed as the unifying principle throughout the course. Major topics are reinforced through a variety of activities including field studies, simulations, laboratory activities, research projects and cooperative learning activities.

**Integrated Chemistry/Physics**
Grades 9-12
2 Semesters
2 Credits

*Prerequisite:* Algebra I recommended (may be taken in conjunction with this course)
Description: Integrated Chemistry-Physics is a course focused on the following core topics: motion and energy of macroscopic objects; chemical, electrical, mechanical and nuclear energy; properties of matter; transport of energy; magnetism; energy production and its relationship to the environment and economy. 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.

**Anatomy and Physiology**

Grades 10-12

2 Semesters

2 Credits

*Prerequisite:* Biology I, grade B or better & Chemistry I (can take Chemistry I concurrently) or consent of instructor.

*Description:* This elective ADVANCED biology course is designed for college bound students interested in pursuing careers in the health services, medicine, or human biology. Anatomy & Physiology is a course in which students investigate concepts related to Health Science, with emphasis on interdependence of systems and contributions of each system to the maintenance of a healthy body. Introduces students to the cell, which is the basic structural and functional unit of all organisms, and covers tissues, integument, skeleton, muscular and nervous systems as an integrated unit. Through instruction, including laboratory activities, students apply concepts associated with Human Anatomy & Physiology. Students will understand the structure, organization and function of the various components of the healthy body in order to apply this knowledge in all health related fields.

**Chemistry I**

Grades 10-11

2 Semesters

2 Credits

*Prerequisite:* Algebra I, grade C or better, can take concurrently.

*Description:* Chemistry I is a course based on the following core topics: properties and states of matter; atomic structure; bonding; chemical reactions; solution chemistry; behavior of gases, and organic chemistry. 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.

**Chemistry II**

Grades 11-12

2 Semesters

2 Credits

*Prerequisites:* Chemistry I, Algebra II, grade B or higher or consent of instructor.

*Description:* 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.

**Physics I**

Grades 9-11

2 Semesters

2 Credits

*Prerequisites:* Algebra I or II

*Description:* Physics I is a course focused on the following core topics: motion & forces; energy and momentum; temperature and thermal energy transfer; electricity and magnetism; vibrations and waves; lights and optics. 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.

**Biology AP**

Grades 11-12

2 Semesters

2 Credits

**Prerequisites:** Biology I, Chemistry I or consent of instructor (recommended, Anatomy & Physiology or Chemistry II)

**Description:** This course is designed around the content established by the College Board. 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. The content is presented at an introductory college level with major concepts reinforced through laboratory activities. This is a good course to prepare for a Life Science/Health Science college major.

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**SOCIAL STUDIES**

**World History & Civilization**

Grade 9-11

2 Semesters

2 Credits

**Required HS course**

**Description:** 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 past to the present. Students are also expected to practice skills and process 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.

**United States History**

Grade 11

**Dual Credit-Ivy Tech**

HIST 101 Survey of American History I (3 credits) &
HIST 102 Survey of American History II (3 credits)

2 Semesters

2 Credits

**Required course for Grade 11**

**Description:** US History builds upon concepts developed in previous studies of U.S. History. 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. Students are expected to trace and analyze chronological periods and examine the significant themes and concepts in U.S. History. They will 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.

*Dual Credit is available through Ivy Tech for those students who meet the pre-requisites.*

**United States Government**

Grade 12

1 Semester

1 Credit

**Required course for Grade 12**

*Description:* This course 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 will 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 will 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 he government’s role in world affairs will be examined. 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, politic and civic activities and the need for civic and political engagement of citizens in the United States.

**Economics**

Grade 12

1 Semester

1 Credit

**Required course for Grade 12**

*Description:* Economics examines the allocation of resources and their uses for satisfying human needs and wants. The course analyzes economic reasoning used by consumers, producers, savers, investors, workers, voters, and government in making decisions. Key elements of the course include study of scarcity and economic reasoning, supply and demand, market structures, role of government, national income determination, the role of financial institutions, economic stabilization, and trade. Students will 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. The behavior of people, societies and institutions and economic thinking is integral to this course.

**Psychology**

Grades 11-12

1 Semester

1 Credit

*Prerequisite:* None

*Description:* Psychology is the scientific study of mental processes and behavior. The course is divided into six content areas and uses scientific methods to explore research methods and ethical consideration. Developmental psychology takes a life span approach to physical, cognitive, language, emotional, social, and moral development. Cognitive aspects of the course focus on learning, memory, information processing, and language. Personality, Assessment, and Mental Health topics include psychological disorders, treatment, personality, and assessment. Socio-cultural dimensions of behavior deal with topics such as conformity, obedience, perceptions, attitudes, and influence of the group on the individual.

**Sociology**

Grades 11-12

1 Semester

1 Credit

*Prerequisite:* None

*Description:* Allow 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 will describe the development of sociology as a social science and identify methods of research. Through research methods
such as scientific inquiry students will 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.

FINE ARTS

**Digital Design I**  
Grades 9-12  
1 Credit per Semester  
The nature of this course allows for successive semesters of instruction at an advanced level.  
Prerequisite: None  
Description: An elective course based on the Indiana Academic Standards for Visual Art. Students in
digital design engage in sequential learning experiences that encompass art history, art criticism,
aesthetics, and production and lead to the creation of portfolio quality works. They incorporate desktop
publishing, multi-media, digitized imagery, computer animation, and web design. Students reflect upon
and refine their work; explore cultural and historical connections; analyze, interpret theorize, and make
informed judgments about artwork and the nature of art; relate art to other disciplines and discover
opportunities for integration; and incorporate literacy and presentational skills.

**Digital Design II**  
Grades 10-12  
1 Credit per Semester  
The nature of this course allows for successive semesters of instruction at an advanced level.  
Prerequisite: Digital Design I  
Description: An elective course that builds on the knowledge gained in the introductory class and
continues in the area of web development. This course may be repeated and in that case, will be geared
for the individual student.

**Drawing**  
Grades 9-12  
1 Semester  
1 Credit  
The nature of this course allows for successive semesters of instruction at an advanced level.  
Prerequisite: None  
Description: Drawing is a course based on the Indiana Academic Standards for Visual Art. Students in
drawing engage in sequential learning experiences that encompass art history, art criticism, aesthetics,
and production and lead to the creation of portfolio quality works. Students create drawings utilizing
processes such as sketching, rendering, contour, gesture, and perspective drawing and use a variety of
media such as pencil, chalk, pastels, charcoal, and pen and ink. They reflect upon and refine their work;
explore cultural and historical connections; analyze, interpret, theorize and make informed judgments
about artwork and the nature of art; relate art to other disciplines and discover opportunities for
integration; and incorporate literacy and presentational skills.

**Painting**  
Grades 9-12  
1 Semester  
1 Credit  
The nature of this course allows for successive semesters of instruction at an advanced level.  
Prerequisite: None
Description: Painting is a course based on the Indiana Academic Standards for Visual Art. Students taking painting engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production that lead to the creation of portfolio quality works. Students create abstract and realistic paintings, using a variety of materials such as mixed media, watercolor, oil, and acrylics as well as techniques such as stippling, gouache, wash, and impasto. They reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills.

Advanced Two-Dimensional Art
Grades 10-12
1 Semester
1 Credit
The nature of this course allows for successive semesters of instruction at an advanced level.

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

Ceramics
Grades 9-12
1 Semester
1 Credit
The nature of this course allows for successive semesters of instruction at an advanced level.

Description: 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.

Sculpture
Grades 9-12
1 Semester
1 Credit
The nature of this course allows for successive semesters of instruction at an advanced level.

Description: 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 portfolio 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.
Advanced 3D Art  
Grades 10-12  
2 Semesters  
2 Credits  
The nature of this course allows for successive semesters of instruction at an advanced level.  
**Prerequisite:** Ceramics and Sculpture  
A series of advanced classes for the talented and interested, self-motivated student that uses various media. Previous experience will be built upon and all media and techniques are explored. Students will continue to increase their understanding and appreciation of art through responding to and making advanced three dimensional art pieces. Student’s individual ability is considered in the evaluation of progress. This course may be repeated.

Fiber Art/Adv. Fibers  
Grades 9-12  
2 Semesters each class  
2 Credits each class  
The nature of this course allows for successive semesters of instruction at an advanced level.  
**Prerequisite:** None  
**Description:** A class exploring fiber based materials. Activities include paper-making, book-making, basketry, loom weaving, hemp jewelry, and others. This class focuses on using authentic and original processes, by covering the art form’s historical importance and its current day uses. This class is for interested and self-motivated students. Student’s individual ability is considered in the evaluation of progress. This course may be repeated and in that case, will be geared for the individual student’s interest.

Beginning Theater Arts  
Grades 9-12  
Lab 1 Credit  
**Prerequisite:** Make application to director.  
**Description:** This course will include development of skills in expressing thoughts, feelings, moods, and characters; in applying language, voice, gestures, and facial expression and body movement to characterization. Instruction will introduce students to theatre warm-up activities for body, and voice and assist them in preparing a role for an actual production. Critical reading skills will be enhanced by working with a variety of scenes. As well as developing personal performance skills, an appreciation of a broad range of forms of drama will be enhanced. This course will not meet during the regular school schedule; it will be associated with the preparation and public performance of one or more plays. It will require a minimum of seventy-five hours of work on the current production as well as assignments relating to the production. Credit will be awarded on a pass/fail basis. Only one credit for theatre arts may be earned in any one year.

Technical Theater  
Grades 9-12  
Lab 1 Credit  
**Prerequisite:** Make application to director.  
**Description:** This course will allow the student an opportunity to combine the theories of design and stagecraft with the construction and operation of the various elements of technical theatre. They will work with scenery, lighting, sound, properties, costumes or make-up, as well as practice theatre safety. Career opportunities in the arts will be presented. Students will continue to study script analysis, and evaluate scripts and live theatre performances. This course will not meet during the regular school schedule; it will be associated with the preparation and public performance of one or more plays. It will require a minimum of seventy-five hours of work on the current production as well as assignments relating to the production. Credit will be awarded on a pass/fail basis. This class may be taken more than once by concentrating on a different technical area than previously studied. Only one credit for theatre arts may be earned in any one year.
**Theatre Production**  
**Grades 10-12**  
Lab 1 Credit  
*Prerequisite:* Successful completion of Beginning Theatre Arts and/or Technical Theatre and application to director.  
*Description:* This course allows the student to explore, develop, and synthesize all elements of theatre. Practical hands-on experiences in acting and/or stagecraft are provided through the preparation and public performance of one or more plays. This course supplements the Beginning Theatre Arts and Technical Theatre courses. This course will not meet during the regular school schedule; it will be associated with the preparation and public performance of one or more plays. It will require a minimum of seventy-five hours of work on the current productions as well as assignments relating to the production. Credit will be awarded on a pass/fail basis. This class may be taken more than once by concentrating on different areas than previously studied. Only one credit for theatre arts may be earned in any one year.

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**MUSIC DEPARTMENT**

**Advanced Concert Band**  
**Grades 9-12**  
2 semesters  
2 credits  
The nature of this course allows for successive semesters of instruction at an advanced level.  
*Prerequisite:* Proficiency on a wind or percussion instrument  
*Description:* A performance based organization consisting of a marching band, pep band, and a concert band. This class is open to individuals with prior experience and proficiency on a wind or percussion instrument. Instruction is designed to enable students to connect, examine, imagine, define, extend, and integrate music study into other subject areas. This class will provide instruction in creating, performing, listening to, and analyzing, in addition to focusing on specific literature being studied. Students are encouraged to participate in solo and ensemble study to further develop elements of musicianship including tone production, technical skills, intonation, sight-reading, and aural skills. Attendance is required at all school performances, events, camps, and rehearsals, including those in the summer months. Activities include football and basketball game performances, school concerts, music festivals, and I.S.S.M.A. organizational contests.

**Beginning/Advance Chorus**  
**Grades 9-12**  
2 Semesters  
2 Credits  
*Description:* Chorus is a performance group which studies 3 and 4-part literature in a wide variety of styles and appropriate difficulty levels, and from a variety of historical periods. This class may consist of 1) Mixed chorus or 2) Female chorus. Instruction is designed to enable students to connect, examine, imagine, define, try, extend, refine, and integrate music study into other subject areas. This class will provide instruction in creating, performing, conducting, listening to and analyzing, in addition to focusing on the specific literature being studied. Students will be expected to participate in learning and performing these varied pieces in school concerts and ceremonies, community performances, district choral festival, organization contest, and other selected performances outside of the school day, that support and extend the classroom learning.

**Applied Music**  
**Grades 9-12**  
1 Semester  
1 Credit  
Can take successive semesters at an advanced level
Prerequisite: For serious music students only
Description: An introduction to the guitar, which will begin with instruction on playing position, basic chords, scales, notes, and basic music notation. The course will continue with instruction on more complicated chords, strumming & picking patterns, and single line melody playing. Ensemble playing will be encouraged. More accomplished students will have the opportunity to perform at school music programs. Used acoustic guitars will be furnished.

Music Theory and Composition
Grades 9-12
1 Semester
1 Credit
Prerequisite: Students should be planning on a college music major or minor
Description: A study of written music, which will begin with a study of basic music notation (notes, lines, spaces, symbols), and will conclude with the study of key signatures, chords and their variations and use in musical compositions. A final project of a transposition or composition is required to complete the second term of study. May be taken as an independent study course. (workbooks one, two and three must be completed for one credit, workbooks four, five, six and an applied project must be completed for the second credit.)

Music History and Appreciation
Grades 9-12
1 Semester
1 Credit
Prerequisite: None
Description: The study of music as it evolved in relation to world events of the same time periods. Included in this study will be an introduction to the music of various world cultures, music fundamentals, listening skills, and a study of styles and characteristics from antiquity to the present time. The study of famous composers and their compositions will be an integral part of this course. This may be taken as an independent study course.

PHYSICAL EDUCATION AND HEALTH

Health & Wellness
Grade 10
1 Semester
1 Credit
Prerequisite: None
Description: A one-semester course required for graduation. This course provides the basis to help students adopt and maintain healthy behaviors. Health education should contribute directly to a student’s ability to successfully practice behaviors that protect and promote health and avoid or reduce health risks. Through a variety of instructional strategies, students practice the development of functional health information; determine personal values that support health behaviors; develop group norms that value a healthy lifestyle; develop the essential skills necessary to adopt, practice, and maintain health-enhancing behaviors. Priority areas include: promoting personal health and wellness, physical activity, 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.
Fulfills the Health & Wellness requirement for the General, Core 40, AHD, and Tech Honors Diplomas
Physical Education I
1 Semester
1 Credit
A one semester course required for graduation
Prerequisite: None
Description: 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. Through a variety of instructional strategies, students practice skills that demonstrate: competency in motor skills and movement patterns needed to perform a variety of physical activities; understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities; regular participation in physical activity to achieve and maintain a health-enhancing level of physical fitness; responsible personal and social behavior that respects self and others in a physical activity setting.

Physical Education II
1 Semester
1 Credit
A one semester course required for graduation
Prerequisite: Physical Education I
Description: 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. Through a variety of instructional strategies, students practice skills that demonstrate: competency in motor skills and movement patterns needed to perform a variety of physical activities; understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities; regular participation in physical activity to achieve and maintain a health-enhancing level of physical fitness; responsible personal and social behavior that respects self and others in a physical activity setting.

Elective Physical Education
2 Semesters
2 Credits
Prerequisite: Completion of Secondary PE I and II and consent of instructor required; may be repeated for credit with permission.
Description: Elective PE promotes lifetime sport and recreational activities and/or provides an in-depth opportunity to study specific areas. It includes the study of physical development and 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 and appropriate personal fitness program that enables them to achieve a desired level of fitness.

TECHNOLOGY EDUCATION

Intro to Manufacturing
2 Semesters
2 Credits
Prerequisite: None
Description: A course that specializes in how people use modern manufacturing systems with an introduction to manufacturing technology and its relationship to society, individuals, and the environment. An understanding of manufacturing provides a background toward developing engineering and technological literacy. This understanding is developed through the study of two major technologies,
material processing and management technology, used by all manufacturing enterprises. Students will apply the skills and knowledge of using modern manufacturing processes.

Introduction to Engineering Design (IED)  
Dual Credit-Ivy Tech DESN 101 Intro to Design Technology (3 credits)
2 Semesters
2 Credits
Prerequisite: None
Description: An introductory course which develops student problem solving skills using the design process. Students document their progress of solutions as they move through the design process. Students develop solutions using elements of design and manufacturability concepts. They develop hand sketches using 2D and 3D drawing techniques. Computer Aided Design (CAD).

Civil Engineering/Architecture (CEA)  
Dual Credit-Ivy Tech DESN 105 Architectural Design I (3 credits)
2 Semesters
2 Credits
Civil Engineering and Architecture introduces students to the fundamental design and development aspects of civil engineering and architectural planning activities. Application and design principles will be used in conjunction with mathematical and scientific knowledge. Computer software programs should allow students opportunities to design, simulate, and evaluate the construction of buildings and communities. During the planning and design phases, instructional emphasis should be placed on related transportation, water resource, and environmental issues. Activities should include the preparation of cost estimates as well as a review of regulatory procedures that would affect the project design.

Digital Electronics  
Dual Credit-Ivy Tech EECT 112 Digital Fundamentals (3 credits)
2 Semesters
2 Credits
Prerequisite: None
Description: A course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices.

Principles of Engineering (POE)  
Dual Credit-Ivy Tech DESN 104 Mechanical Graphics (3 credits)
2 Semesters
2 Credits
Prerequisite: None
Description: A course that helps students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit people. The course also includes concerns about social and political consequences of technological change.

Computer Integrated Manufacturing (CIM)  
Dual Credit-Ivy Tech ADMF 116 Automation & Robotics in Manufacturing I (3 credits)
2 Semesters
2 Credits
Prerequisite: None
Description: A course that applies principles of robotics and automation. The course builds on computer solid modeling skills developed in Introduction to Engineering Design, and Design and Drawing for Production. Students use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design analysis are included.

**Engineering Design and Development**  
Grades 10-12  
2 Semesters  
2 Credits  
Prerequisite: None  
Description: An engineering research course, in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses and are guided by a community mentor. They must present progress reports, submit a final written report and defend their solutions to a panel of outside reviewers at the end of the school year.

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**Business, Marketing & Info Tech**

**Computer Tech Support**  
Grades 9-12  
2 semesters maximum  
6 credits maximum  
Description: Computer Tech Support allows students to explore how computers work. Students learn the functionality of hardware and software components as well as suggested best practices in maintenance and safety issues. Through hands on activities and labs, students learn how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems.

**Introduction to Computer Science**  
Grades 9-12  
2 Semesters  
2 Credit  
Description: Intro to Computer Science allows students to explore the world of Computer Science. Students will gain a broad understanding of the areas composing Computer Science. Additionally, there will be a focus on the areas of computer programming, gaming/mobile development, and artificial intelligence/robotics.

**Computer Tech Support/Helpdesk**  
Grades 10-12  
4 semesters maximum  
4 credits maximum  
Prerequisite: Computer Tech Support  
Description: Computer Tech Support allows students to explore how computers work. Students learn the functionality of hardware and software components as well as suggested best practices in maintenance and safety issues. Through hands on activities and labs, students learn how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. Students will be required to be available during this class to troubleshoot student and staff computers. They will be required to keep accurate logs of their steps involved in the job. Students should have troubleshooting knowledge and have good attendance and academic standing.
Networking I
2 Semesters maximum
6 Credits maximum
Description: Networking Fundamentals introduces students to concepts of local and wide area networks, home networking, networking standards using the IEEE/OSI Model, network protocols, transmission media and network architecture/topologies. Security and data integrity will be introduced and emphasized throughout this course. The purpose of this course is to offer students the critical information needed to successfully move into a role as an IT professional supporting networked computers. Concepts covered will include TCP/IP client administration, planning a network topology, configuring the TCP/IP protocol, managing network clients, configuring routers and hubs as well as creating a wireless LAN.
Counts as a Directed Elective or Elective for the General, Core 40, AHD, Tech Honors Diplomas

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

Networking II Servers
2 Semesters maximum
6 Credits maximum
Description: Servers and Security focuses on the software skills needed to manage a network. Students will learn and practice the skills necessary to perform in the role of a network administrator. They will be able to accomplish fundamental network management tasks on a server such as set up of computer network services, create user and appropriate login scripts, develop groups, set the server remotely, set up security, backup/restore the server and setup/maintain clients.

Computer Science I
2 Semesters maximum
6 Credits maximum
Description: Introduces the structured techniques necessary for efficient solution of business-related computer programming logic problems and coding solutions into a high-level language. The fundamental concepts of programming are provided through explanations and effects of commands and hands-on utilization of lab equipment to produce correct and accurate outputs. Topics include flowcharting, pseudo coding, and hierarchy charts as a means to solving problems.

Computer Science II Programming
6 Credits Maximum
Recommended Pre-requisite: Computer Science I
Programming explores and builds skills in programming and a basic understanding of the fundamentals of procedural program development using structured, modular concepts. Coursework emphasizes logical program design involving user-defined functions and standard structure elements. Discussions will include the role of data types, variables, structures, addressable memory locations, arrays and pointers and data file methods.
Computer Science II Informatics

6 credits maximum

Pre-Requisite: Computer Science I

Description: Introduces the student to terminology, concepts, theory, and fundamental skills used to implement information systems and functions in a wide variety of applications from small businesses to large enterprise corporations. Topics include the history and trends in computing, operating systems, security, cloud implementations and other concepts associated with applying the principles of good information management to the organization.

Microsoft IT Academy

Microsoft certification(s) in class.

(ITU) Computer Tech Support
and Intro to Computer Science (Pre-Programming)
Teacher: Mrs. Rhoads (rhowadsa@newton.k12.in.us)

**WHAT IS IT?**
Information Technology, or IT, describes any technology that powers or enables the storage, processing and information flow within an organization. Anything involved with computers, software, networks, intranets, web sites, servers, databases, coding, and telecommunications falls under the IT umbrella.

Four of the most in-demand jobs, year after year, are IT related jobs. IT is everywhere. For that reason, IT professionals are in high demand. From 2004 to 2014 it was estimated that there will be 1.3 million job openings in the IT sector. That’s a 31 percent growth in the IT job market. The average starting salary is upwards of $50,000. This is a job market that continues to grow with the expansion of technology.

**IT SKILLS ARE IN DEMAND!**
In IT class you get the technology skills that you need for the classroom, home, college AND for your future career.

IT jobs were the third most difficult positions to fill, according to a 2012 Manpower Group’s Talent Shortage Survey.

LEARN THE TOP FIVE SKILLS THAT HIRING MANAGERS WANT BY TAKING IT CLASSES:
- App Development
- Support / Help Desk
- Security
- Network Administration
- Business Intel

**HANDS ON WORK**
Students will master IT skills with hands-on lessons using virtual labs as well as work on live equipment. There will not be any outside of class work (homework) required. Students may elect to work at the Help Desk after one semester of experience. IT students gain valuable work related leadership skills as they advance in the IT curriculum.

**Information Technology Course Options for your IT career pathway**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
<th>Third Year</th>
<th>Fourth Year</th>
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<tr>
<td>4803-(ITU) Computer Tech Support</td>
<td>5234-(ITII) Networking I and/or</td>
<td>4588-Networking II: Infrastructures and/or</td>
<td>5257-Networking II: Servers &amp; Security and/or</td>
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<tr>
<td>5230-Intro to Computer Science Pre-Programming</td>
<td>4801-Computer Science I: Programming</td>
<td>5236-Computer Science II: Programming</td>
<td>5251-Computer Science II: Informatics Programming</td>
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</tbody>
</table>

Microsoft Certification meets the industry based credential requirement of the Technical Honors Diploma.

All classes in the top row are available double period. Multiple Certifications available for every course.
Agricultural Education

Introduction

Agricultural Education is an active part of the curriculum for many high schools in Indiana. This program area combines the home, the school, and the community as the means of education in agriculture. The courses provide students with a solid foundation of academic knowledge and ample opportunities to apply this knowledge through classroom activities, laboratory experiments and project applications, supervised agricultural experiences, and the FFA.

The vision and mission of Agricultural Education is: that all people value and understand the vital role of agriculture, food, fiber, and natural resource systems in advancing personal and global well-being; and that students are prepared for successful careers and a lifetime of informed choices in agriculture.

The goals for Agricultural Science and Business students focus on providing learning experiences that will allow them to:

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

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

Intro to Agriculture, Food & Natural Resources

2 semesters
2 credits
Prerequisite: None

Description: Introduction to Agriculture, Food and Natural Resources is a two semester course that is highly recommended as a prerequisite and 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, agricultural power, structure and technology, leadership development, supervised agricultural experience and career opportunities in the area of agriculture, food and natural resources.

**Animal Science**

*Grades 10-12*

**Dual Credit-Ivy Tech AGRI 103 Animal Science (3 credits)**

2 Semesters

2 Credits

*Prerequisite:* None

- This course may fulfill up to two credits of the minimum requirement for graduation.
- Animal Science may be offered as a small animal/large animal course and or include an advanced, local content specific application such as aquaculture.
- A **Core 40 directed elective** as part of a technical career area.
- This course qualifies as an **Academic Honors Diploma elective**.
- Standards and learning activities defined.
- This course is included as a component of the Agriculture, Food and Natural Resources career cluster and may also be included as a component of the Science, Engineering & Information Technology; Personal & Commercial Services; Business, Management & Finance; Marketing, Sales & Promotion; and Health Services career clusters.

*Description:* This course is a yearlong program that provides students with an overview of the field of animal science. Students participate in a large variety of activities and laboratory work including real and simulated animal science experiences and projects. Areas that the students study may be applied to both large and small animals. Topics to be addressed include: anatomy and physiology, genetics, reproduction and biotechnology, nutrition, aquaculture, careers in animal science, animal health, meeting environmental requirements of animals, and management practices for the care and maintenance of animals.

**Horticultural Science I and II**

*Grades 10-12*

**Dual Credit-Ivy Tech AGRI 116 Survey of Horticulture (3 credits)**

2 Semesters each class

2 Credits each class

*Prerequisite:* Fundamentals of Agricultural Science and Business or by permission of the teacher

- This course can be offered for a second full year at an advanced level and may also be offered in a two or three hour block for four semesters with a maximum of twelve credit hours. The student must develop a plan of study approved by the teacher. Landscape Design is a typical curriculum offered at the advanced level.
- This course may fulfill up to two credits of the minimum requirement for graduation.
- A **Core 40 directed elective** as part of a technical career area.
- This course qualifies as an **Academic Honors Diploma elective**.
- Standards and learning activities defined.
- This course is included as a component of the Agriculture, Food and Natural Resources career cluster and may also be included as a component of the Business, Management & Finance; Marketing, Sales & Promotion; and Transportation, Distribution & Logistics; Arts, A/V Technology & Communications; Science, Engineering & Information Technology; Social & Recreation Services career clusters.

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

**Landscape Management I and II**  
Grades 10-12  
Dual Credit-Ivy Tech LAND 103 Landscape Management I (3 credits)  
2 Semesters each class  
2 Credits each class  
*Recommended Prerequisite:* Intro to Ag., Food & Natural Resources  
*Description:* Landscape Management is a two semester course that provides the student with an overview of the many career opportunities in the diverse field of landscape management. Students are introduced to the procedures used in the planning and design of a landscape using current technology practices, the principles and procedures of landscape construction, the determination of maintenance schedules, communications and management skills necessary in landscape operations.

**Natural Resources**  
Grade 10, 11  
Dual Credit-Ivy Tech AGRI 115 Natural Resources Management  
2 Semesters  
2 Credits  
*Recommended Prerequisites: Introduction to Agriculture, 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.

**Plant and Soil Science**  
Grades 9-12  
Dual Credit-Ivy Tech AGRI 105 Plant & Soil Science (3 credits)  
2 Semesters  
2 Credits  
*Recommended Prerequisite: Intro to Ag, Food and Natural Resources*  
- Fulfills a Life Science or Physical Science requirement for the general diploma only or counts as a Directed Elective or Elective for the General, Core 40, AHD or Tech Honor Diplomas.  
*Description:* Plant and Soil Science is a two semester course that provides students with opportunities to participate in a variety of activities which includes laboratory work. The following topics are found in this course: plant taxonomy, components and their functions; plant growth, reproduction and propagation; photosynthesis and respiration; environmental factors effecting plant growth, management of plant diseases and pests; biotechnology; the basic components and types of soil; calculation of fertilizer application rates and procedures for application; soil tillage and conservation; irrigation and drainage; land measurement, cropping systems; and harvesting. Leadership development, supervised agricultural experience and career exploration opportunities in the field of plant and soil science are also included.

**Agribusiness Management**  
Grades 11-12  
Dual Credit-Ivy Tech AGRI 101 Ag Business & Farm Management (3 credits)  
2 Semesters  
2 Credits  
*Prerequisite:* None  
- A Core 40 directed elective as part of a technical career area.  
- This course qualifies as an Academic Honors Diploma elective.  
- Standards and learning activities defined.  
- This course is included as a component of the Agriculture, Food and Natural Resources career cluster and may also be included as a component of the Business, Management, and Finance;
Manufacturing & Processing; Marketing, Sales & Promotion; Personal & Commercial Services; Science, Engineering & Information Technology; Social & Recreation Services; and Transportation, Distribution & Logistics career clusters.

**Description:** Agribusiness Management is a yearlong course that presents the concepts necessary for managing an agriculture-related business from a local and global perspective. Concepts covered in the course include: exploring careers in agribusiness, global visioning, applying E-commerce, risk management, understanding business management and structures, entrepreneurship, the planning, organizing, financing, and operation of an agribusiness, economic principles, credit, computerized record keeping, budgeting, fundamentals of cash flow, federal, state, property and sales tax, insurance, cooperatives, purchasing, the utilization of information technology in agribusiness, marketing agricultural products, developing a marketing plan, advertising and selling products and services, understanding consumers and buying trends, agricultural law applications and employability skills. Emphasis is also placed on Commodity Marketing and a 6 week project will allow students to see real life examples of trading a commodity. A trip to the Chicago Board of Trade and the Chicago Mercantile Exchange will allow students to see first hand how commodities are traded.

**Agricultural Power, Structure & Technology I/II/III**  
**Dual Credit-Ivy Tech AGRI 106 Agricultural Mechanization**  
Grades 9-12  
2 Semesters per class  
2 Credits per class  
6 Semesters maximum  
**Recommended Prerequisite:** Intro to Ag, Food & Natural Resources  
**Description:** Agricultural Power, Structure & Technology is a two semester, lab intensive course in which students develop an understanding of the 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 agricultural power, structure and technology.

**Supervised Agricultural Experience (SAE)**  
**Grades 10-12**  
**Prerequisite:** None  
- A maximum of eight credits can be earned in this course when offered as a one hour course/eight semesters, some of which can be earned during summer sessions. Curriculum content and competencies should not be duplicated when multiple credits are being earned.  
- A Core 40 directed elective as part of a technical career area.  
- This course qualifies as an Academic Honors Diploma elective.  
- Standards and learning activities defined.  
- This course is included as a component of the Agriculture, Food and Natural Resources career cluster and may also be included as a component of the Arts, A/V Technology & Communications; Building & Construction; Education & Training; Law, Public Safety & Security; Manufacturing & Processing; Marketing, Sales & Promotion; Mechanical Repair & Precision Crafts; Personal & Commercial Services; Science, Engineering & Information Technology; Social & Recreation Services; Transportation, Distribution & Logistics; Business, Management and Finances; and Health Services career clusters. **Description:** 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 should experience and apply what is learned in the classroom, laboratory, and training site to real-life situations. Students work closely with their agricultural science and business teacher(s), parents, and/or employers to get the most out of their SAE program. This course should be offered each semester as well as during the summer session. SAE may be offered as a Cooperative Education Program. Curriculum content and competencies should be varied so that school year and summer session experiences are not duplicated.
**Advanced Life Science, Animals (L)**  
Grades 11-12  
2 Semesters  
2 Credits  
*Prerequisite:* Biology I and Chemistry I  
*Fulfills a Core 40 Science requirement for the General, Core 40, Core 40AHD, and Core 40THD OR counts as an elective or directed elective for any diploma.*  

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

**Advanced Life Science Food (ALS Foods)**  
Grades 11-12  
2 Semesters  
2 Credits  
*Prerequisite:* Chemistry I, can take concurrently  
*Fulfills a Core 40 Science requirement for the General, Core 40, Core 40AHD, and Core 40THD OR counts as an elective or directed elective for any diploma.*  

*Description:* ALS Foods is a two semester course that provides students with opportunities to participate in a variety of activities which includes laboratory work, leadership development, supervised agricultural experience and exploration of career opportunities. This is a standards based, interdisciplinary science course that integrates biology, chemistry, and microbiology in the context of foods and the global food industry. Students enrolled in this course formulate, design, and carry out food base laboratory and field investigations as an essential course component. Students understand how biology, chemistry, and physics principles apply to the composition of foods, the nutrition of foods, food and product development, food processing, safety and storage. Students completing this course will be able to apply the principles of scientific inquiry to solve problems related to biology, physics and chemistry the context of highly advanced agricultural applications of food.

**Food Science**  
Grades 9-12  
*Dual Credit-Ivy Tech AGRI 104 Food Science (3 credits)*  
2 Semesters  
2 Credits  
*Recommended Prerequisite:* Intro to Ag, Food and Natural Resources  
*Fulfills a Life Science or Physical Science requirement for the General Diploma only or counts as a Directed elective or elective for the General, Core 40, Core 40AHD, Core 40THD.*  

*Description:* Provides students with an overview of food science and its importance. Introduction to principles of food processing, food chemistry and physics, nutrition, food microbiology, preservation, packaging and labeling, issues and careers in the food science industry help students understand the role that food science plays in securing a safe, nutritious and adequate food supply.

**Advanced Life Science Plant & Soils-Not offered**  
Grades 11-12  
2 Semesters  
2 Credits  
*Recommended Prerequisite:* Intro to Ag. Food and Natural Resources, Plant & Soil Science, Chemistry and Biology  
*Fulfills a Core 40 Science requirement for the General, Core 40, Core 40AHD, and Core 40THD OR counts as an elective or directed elective for any diploma.*  

*Description:* ALS Plants and Soils is a two semester course that provides students with opportunities to participate in a variety of activities which includes laboratory work. Students study concepts, principles
and theories associated with plants and soils. Students recognize how plants are classified, grown, function and reproduce. Students explore plant genetics and the use of plants by humans. They examine plant evolution and the role of plants in ecology. Students investigate, through laboratory and fieldwork, how plants functions and the influence of soil in plant life.
A core 40, AHD, THD course

**Trade & Industrial Education**

**Welding Technology I**  
*Grades 11-12*  
**Dual Credit-Ivy Tech**  
INDT 114 Introductory Welding (3 credits) & WELD 108 Shielded Metal Arc Welding (3 credits)  
2 Semesters  
2 Credits  
2 semester maximum  
*Prerequisite:* None  
*Description:* 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 guide lines 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.

**Welding Technology II**  
*Grade 12*  
**Dual Credit-Ivy Tech** WELD 109 Oxy-Fuel Gas Welding & Cutting (3 credits) AND WELD 2017 Gas Metal Arc Welding (3 credits)  
2 Semesters  
2 Credits  
2 semester maximum  
*Prerequisite:* Welding Technology I  
*Description:* Builds on the Gas Metal Arc welding, Flux Cored Arc Welding, Gas Tungsten Arc welding, Plasma Cutting and Carbon Arc skills covered in Welding Technology I. Emphasis is placed on safety at all times. OSHA standards and guide lines 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.

**Cosmetology I**  
*Grade 11, 12*  
2 Semesters  
1-3 Credits  
6 Credits maximum  
*Description:* Cosmetology I offers an introduction to cosmetology with an emphasis on basic practical skills and theories including roller control, quick styling, shampooing, hair coloring, permanent waving, facials, manicuring, business and personal ethics, bacteriology, and sanitation. In the second semester greater emphasis is placed on the application and development of these skills. The State of Indiana requires a total of 1500 hours of instruction for licensure.
FAMILY & CONSUMER SCIENCE

Preparing for College & Careers

1 Semester
1 Credit
A required 9th grade course

Prerequisite: None

Description: 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 employable 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.

Early Childhood Education I

Grades 9-12

2 Semesters
2 Credits

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

Early Childhood Education II

Grades 10-12

2 Semesters
2 Credits

Prerequisites: Successful completion of Early Childhood I

Description: Early Childhood prepares students for employment in early childhood education and related careers that involve working with children from birth to 8 years (3rd grade) and provides the foundations for study in higher education that leads to early childhood education and other child-related careers. ECE
II is a sequential course that builds on the foundational knowledge and skills of ECE I. In ECE II students further refine, develop, and document the knowledge, skills, attitudes, and behaviors gained in the foundational course. Major topics of ECE II include: overview of the Child Development Associate credential, safe and healthy learning environment, physical and intellectual competence, social and emotional development, relationships with families, program management, and professionalism. A standards-based plan for each student guides the early childhood education experiences. Students are monitored in these experiences by the Early Childhood Education II teacher.

**Education Professions I**

Grades 11-12

2 Semesters

2 credits

*Prerequisites:* Child Development I and II

*Description:* Education Professions I 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. Field experiences in one or more classroom settings, resumes, and career portfolios are required components. A standard-based plan guides the students’ field experiences. Students are monitored in their field experiences by the Education Professions teacher. Articulation with postsecondary programs is encouraged.

**Education Professions II**

Grade 12

2 Semesters

2 Credits

*Prerequisite:* Education Professions I

*Description:* Education Professions II builds on the content knowledge and skills of Education Professions I and prepares students for employment in education and related careers and provides the foundation for study in higher education in the 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 learner process, planning instruction, learning environment, and instructional assessment strategies. Field experiences in one or more classroom settings, resumes, and career portfolios are required components. A standard-based plan guides the students’ field experiences. Students are monitored in their field experiences by the Education Professions teacher. Articulation with postsecondary programs is encouraged.

**Entrepreneurship and New Ventures Capstone**

Grades 11-12

2 Semesters

2 Credits

*Recommended Prerequisite:* Introduction to Business

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

Health Science Education I: Intro to Health Careers  Grades 11-12
Dual Credit-Ivy Tech HLHS 100 Intro to Health Careers (3 credits)
2 Semesters
2 Credits
Prerequisite: None

Description: Health science education content includes skills common to specific health career topics such as nursing care, dental care, animal care, medical laboratory, public health, an introduction to health care systems, anatomy, physiology, and medical terminology. Leadership skills developed through HOSA participation are also included. Lab experiences are planned and organized around the activities associated with the students career objectives. Job seeking and job maintenance skills, personal management skills, self-analysis to aid in career selection and completion of the application process for admission into a post-secondary program of their choice are also included in this course.

Health Science Education II: Athletic Training
2 Semesters
2 Credits
Prerequisite: None
Recommended Prerequisite: Biology, Chemistry, Anatomy and Physiology

Description: Introduction to Physical Therapy introduces students to careers in physical therapy, athletic training and sports medicine. Due to the multi-disciplinary/cross training trend in health care delivery, this course will offer an overview of other allied health careers interrelated to physical therapy, such as athletic training and sports medicine. Various instructional strategies and technologies are used to teach students about career opportunities and their associated roles and responsibilities, legal and ethical issues, patient diversity, anatomy and physiology, injury mechanisms, disorders requiring physical therapy, aspects of rehabilitation, safety concerns and patient documentation. This course qualifies as a Directed Elective and Elective for the Core 40, Core 40 with Academic Honors, and Core 40 with Technical Honors Diplomas.

Medical Terminology  Grades 11-12
Dual Credit-Ivy Tech HLHS 101 Medical Terminology (3 credits)
2 Semesters
2 Credits
Prerequisite: None

Description: Medical terminology will address basic terminology that is required by allied health professions. Additionally it will provide basic knowledge of anatomy and physiology, pathology, and pharmacology. Symbols, medical abbreviations, Greek, and Latin prefixes, suffixes, word roots and meaning are taught within the context of the body and its systems. Emphasis will be placed on developing a medical vocabulary including, meaning, spelling, and pronunciation that is necessary for interpreting medical records and communications. This course will provide a strong foundation for students interested in medical and other allied health careers. It is recommended for juniors and seniors who have an interest in pursuing a post-secondary education in a medical or allied health field.

*Dual Credit is available through Ivy Tech for those students who meet the pre-requisites.
Work Base Learning

| WBLC-Business & Marketing/Internship | Grades 11-12 |
| WBLC-Multiple Pathway/Agriculture    | Grade 12     |

2 Semesters
2 Credits

Work Base Learning 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 student’s skills and knowledge in their chosen career path or furthers their study within the area of interest.