



This way to Success

Career Academy South Bend

Course Guide



3801 CRESCENT CIRCLE SOUTH BEND, IN 46628

CAREER ACADEMY COURSE GUIDE

Every student at Career Academy shall have equal educational opportunities regardless of race, color, creed, sex, marital status, national origin or handicap.

Each student has available the services of a qualified counselor who has information regarding his/her assigned students. This information enables the counselor to better assist the student regarding aspects of the educational program. We hope that both students and parents will make use of this service. Telephone calls should be directed to the Guidance Office at the school.

GUIDANCE OFFICE
Hours: 8:00 A.M. – 4:00 P.M.
GUIDANCE COUNSELOR
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TABLE OF CONTENTS

2	About Registration and Use of This Guide
3	Graduation Requirements
4	Honors and Technical Honors Requirements
4	Schedule Change Policy
5	Graduation Qualifying Exam (ISTEP+ Exams)
5	Dual Credit Courses
6	Four Year Plan
7	Early College Information
8	Description of Courses
9	English
11	Mathematics
13	Social Studies
15	Science
18	STEM: Engineering
22	Manufacturing
23	Business
26	PE/Health
27	World Language
28	Fine Arts
34	College and Career/Workforce
38	Dual Credit Courses

CAREER ACADEMY REGISTRATION AND COURSE DESCRIPTION GUIDE

We hope that this guide will help you and your parents plan your class schedule while at Career Academy. At the critical decision points in your high school career, you should review your college and career goals with your counselor and thoughtfully develop a program of study that will help you achieve these goals.

Graduation requirements are designed to give you a balanced program, which will help you develop the skills and understanding necessary to become a well-educated person. A four-year course of study will include a combination of core subjects and a wide range of electives. These, if wisely selected, will help you explore and develop your own interests and abilities.

ALTHOUGH YOUR PARENTS AND COUNSELOR WISH TO HELP YOU IN PLANNING YOUR HIGH SCHOOL CURRICULUM, THE RESPONSIBILITY FOR THIS PLANNING RESTS WITH YOU:

You should consider the following:

1. Know what the graduation requirements are and what diploma type you are working towards. Are you meeting these requirements in your planning?
2. What are college entrance or career technical requirements?
3. See your counselor if you need more information about credits for graduation or college entrance.

Plan ahead – not for just next year, but for your entire high school career.

4.

5. Before selecting a subject, check the course description to be sure it fits your needs, interests and abilities – and that you have completed the prerequisite course work necessary for enrollment.
6. You must have teacher approval for some courses. Check carefully.
7. When completing your course request, be sure you have made selections for all eight periods and indicated alternative options.

In this booklet we have provided you with a four-year planning form. You may find this helpful in preparing your course of study while in high school.

REQUIREMENTS FOR GRADUATION FROM HIGH SCHOOL

INDIANA CORE40	
English/ Language Arts	8 credits
	Including a balance of literature, composition and speech.
Mathematics	6 credits (in grades 9-12)
	2 credits: Algebra I 2 credits: Geometr 2 credits: Algebra II <i>Or complete Integrated Math I, II, and III for 6 credits. Students must take a math or quantitative reasoning course each year in high school</i>
Science	6 credits
	2 credits: Biology I 2 credits: Chemistry I or Physics I or Integrated Chemistry-Physic 2 credits: any Core 40 science course
Social Studies	6 credits
	2 credits: U.S. History 1 credit: U.S. Government 1 credit: Economics 2 credits: World History/Civilization or Geography/History of the World
Directed Electives	5 credits
	World Languages Fine Arts Career and Technical Education
Physical Education	2 credits
Health and Wellness	1 credit
Electives*	6 credits (College and Career Pathway courses recommended)

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

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

Additional Requirement:

2019 Cohort (Graduates) and beyond: Must pass the ISTEP 10+ test to graduate.

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

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

DUAL CREDIT COURSES

Career Academy offers dual credit courses, which are college level courses that juniors and seniors can enroll in to earn both high school and college credit. Dual Credit classes are taken at the high school. With a passing grade of a “C” or higher a student is awarded high school and college credit. Students can earn college credits through Ivy Technical College and Purdue North West.

Students are able to earn college credits while still in high school.

Courses currently being offered for dual credit include:

US History, Government, English 11 and 12, Pre-Calculus, Calculus and Chemistry II and others may be added.

Successful completion of college-level courses helps students with a

SCHEDULE CHANGE POLICY: Final schedules will be available early August. If a schedule needs to be changed an appointment must be made BEFORE the start of school. Because students choose their classes, schedule changes will only be made if one of the following four conditions applies:

1. Student needs a higher level class because of a college or technical school requirement.
2. Student has an error on his/her schedule.
3. Student needs to make up a class because of a failure or required credit.
4. Student passed the course in summer school, and the schedule needs to be adjusted.

Scheduling determines staffing needs. Therefore, NO schedule changes after the first ten days of a semester.

Please note that ALL students must have at least 6 classes during their senior year; this can include internships.

FOUR-YEAR PLAN WORKSHEET

This four-year plan sheet is intended as a blueprint for your high school success. We encourage you to enlist the aid of your parents in selecting courses that will meet your educational career plans. The plan sheet can be revised at any time and will provide an overall view of your academic goals.

Diploma Type:

Core 40

Academic Honors

Technical Honors

9 th Grade	
1 st Semester	2 nd Semester
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

10 th Grade	
1 st Semester	2 nd Semester
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

11 th Grade	
1 st Semester	2 nd Semester
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

12 th Grade	
1 st Semester	2 nd Semester
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

WHAT ARE YOUR FUTURE PLANS?

Apprenticeship

Military

2 Year College

4 Year College

Workforce

CAREER CLUSTER

*Arts

*STEM: -

-Engineering

*Advanced

-Manufacturing

-Welding

-Machining

-Robotics

*Health Science

*IT Computer Science

*Business

*Architecture and Construction

Early College develops a unique vision and learning environment that represents community interest and student needs.

- Students have the opportunity to earn transferrable college credit while still in high school.
- Mastery and competence are rewarded with enrollment in college-level courses and the opportunity to earn college credits for free
- The years to a post-secondary degree are compressed.
- Middle school 8th graders are included in the early college to promote academic preparation and awareness of the early college option.

Admission recommendations Career Academy Early College:

- Application forms for students on track to be promoted to the next grade level
- Student is the first generation in their family to attend college
- Student is an English Language Learner
- Student demonstrates characteristics to function in a rigorous learning environment
- Student is representative of underrepresented population in post-secondary education institution
- Student is required to have 11 credits or more at the end of 9th grade
- Student to meet or exceed 95% attendance
- Student has demonstrated positive behaviors conducive for the university environment

- Provide academic and social supports that help students succeed in a challenging course of study.
- Learning takes place in small, personalized learning environments that demand rigorous high – quality work and provide extensive support.
- The physical transition between high school and college is a much smoother transition because students are able to apply to colleges and receive assistance with filling out financial aid forms during the last year of high school.

The application process will consist of the following:

1. Career Academy Early College Application
 - a. Completed by parent or guardian
2. Career Academy Early College Student Recommendation
 - a. Completed by student
 - b. Completed by (2) teachers
3. Career Academy Early College Parent/Guardian Support Agreement
4. Career Academy Early College Student Agreement

Course Descriptions
Please be sure to look at
grade level recommendations
and prerequisites!



ENGLISH

ENGLISH 9

1002

Prerequisite: None
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level 9-12

This course involves an integrated study of literature, composition, grammar, and vocabulary and the use of technology. It emphasizes reading, writing, and communication skills to develop thinking skills. Students read novels, short stories, essays, nonfiction, poetry, and drama. Students learn the proper writing process and master paragraph development as they prepare a variety of writing applications including a short research report.

ENGLISH 10

1004

Prerequisite: None
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 10

Like English 9, this course involves an integrated study of literature, composition, grammar, and vocabulary, and the use of technology, as well as a focus upon ISTEP+ proficiency review for the English 10 End-of Course Assessment (ECA). It emphasizes reading, writing, and communication skills to develop higher level thinking. Students will demonstrate and extend their knowledge and skills developed in language arts. Students will prepare a variety of writing applications including a research report of two to four pages.

ENGLISH 11

1006

Prerequisite: None
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 11

Through the integrated study of literature, composition, grammar, vocabulary, and the use of technology, this course continues to develop skills as outlined in English 9 and 10. The specific body of literature is mainly American literature through a chronological study of American poetry and prose from the periods of Puritanism to Modernism. The course of study will emphasize reading, writing, and communication skills of students to develop critical thinking skills. Students will produce a variety of writing applications including literary analysis, narrative, reflective, persuasive, and technical writing, as well as a three to four page research paper.

ENGLISH 12

1008

Prerequisite: None
2 Semesters; 2 Credits;
A Core 40, THD and AHD course
Grade Level: 12

Through the integrated study of literature, composition, grammar, vocabulary, and the use of technology, this course continues to develop skills as outlined in English 9, 10 and 11. With the emphasis on the needs and future plans of the students, this course sharpens critical reading and writing skills with a focus on literature of the world from 3000 BC to the present. Students will produce a variety of writing applications including literary analysis, narrative, reflective, persuasive, and technical writing, as well as three to five page research paper

SPEECH**1076****Prerequisite: None****1 Semester; 1****Elective for Core 40, THD and AHD****Grade Level: 9-12**

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

LANGUAGE ARTS ENRICHMENT**1010****Prerequisite: None****2 Semesters; 2 Credits****Elective for Core 40, THD and AHD****Grade Level: 9-12**

Language Arts Lab is a supplemental course using Read 180 that provides students with individualized or small group instruction designed to support success in completing language arts course work aligned with *Indiana's Academic Standards for English/Language Arts* in Grades 9-12 and the *Common Core State Standards for English/Language Arts*. The nature of this course allows for successive semesters of instruction at advanced levels.

STUDENT PUBLICATIONS: NEWSPAPER AND/OR YEARBOOK**1086****Prerequisite: Application****2 Semesters; 2 Credits****Elective for Core 40, THD and AHD****Grade Level: 9-12**

Student Publications, a course based on the High School Journalism Standards and the Student Publications Standards, is the continuation of the study of journalism. Students demonstrate their ability to do journalistic writing and design for high school publications, including school newspapers and yearbooks, and a variety of media formats. Students follow the ethical principles and legal boundaries that guide scholastic journalism. Students express themselves publicly with meaning and clarity for the purpose of informing, entertaining, or persuading. Students work on high school publications or media staffs so that they may prepare themselves for career paths in journalism, communications, writing, or related fields. Up to 8 credits can be earned

MATHEMATICS.

Mathematic Essentials

2560

Prerequisite: Teacher recommendation

2 Semesters; 2 Credits

A Core 40, THD and AHD courses

Grade Level: 9

Mathematics Essentials will improve student understanding of basic mathematics concepts and develop essential skills needed to be successful in the high school mathematics curriculum. Teacher/Parent recommendation is suggested. This DOES NOT COUNT towards a math credit for diplomas. This class will be counted as an elective credit.

ALGEBRA I

2520

Prerequisite: None

2 Semesters; 2 Credits

A Core 40, THD and AHD courses

Grade Level: 9-10

Formalizes and extends the mathematics that students learned in the middle grades. Five critical areas comprise: Relations and Functions; Linear Equations and Inequalities; Quadratic and Nonlinear Equations; Systems of Equations and Inequalities; and Polynomial Expressions. These 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, as students engage in methods for analyzing, solving, and using quadratic functions.

ALGEBRA ENRICHMENT

2516

Prerequisite: Must be enrolled in Alg I

2 Semesters; 2 Credits

Elective for Core 40, THD and AHD

Grade Level: 9-10

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

ALGEBRA II

2522

Prerequisite: Successful completion of Alg I

2 Semesters; 2 Credits

A Core 40, THD and AHD course

Grade Level: 10-12

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.

GEOMETRY

2532

Prerequisite: None

2 Semesters; 2 Credits

A Core 40, THD and AHD course

Grade Level: 9-12

This course 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 Polyhedral.

MATHEMATICS LAB: GEOMETRY

2560

Prerequisite: Successful completion of Alg I

2 Semesters; 2 Credits

A Core 40, THD and AHD courses

Grade Level: 9-12

Mathematics Lab should be taken in conjunction with Geometry. 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 is taken in conjunction with a Core 40 mathematics course, and the content of Mathematics Lab should be tightly aligned to the content of its corresponding course.

PRE-CALCULUS/TRIGONOMETRY

2564

Prerequisite: Successful completion of Alg II and Geom

2 Semesters; 2 Credits

A Core 40, THD and AHD course Grade Level: 11-12

This is a 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. Students will be required to complete both semesters for credit. Students will be required to do advanced levels of work. Dual credit option.

CALCULUS

2527

Prerequisite: Successful completion of Pre-Calc/Trig

2 Semesters; 2 Credits

A Core 40, THD and AHD course

Grade Level: 12

This course is based on content established by the College Board. Calculus AB is primarily concerned with developing the students' understanding of the concepts of calculus and providing experience with its methods and applications. The course emphasizes a multi-representational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. Topics include: (1) functions, graphs, and limits; (2) derivatives; and (3) integrals. Advanced Placement (AP) Courses are intended to be the equivalent to the comparable college level course.

SOCIAL STUDIES

WORLD HISTORY AND CIVILIZATION

1548

Prerequisite: Successful completion of World History and Geography 2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 10

World History is a two semester Core 40 course that explores the events, people, movements, and changes that have affected the evolution of world history. The first semester is a survey of world history from prehistoric times through the Renaissance and the Reformation. The second semester is a survey from the Age of Discovery to modern times. There is an emphasis on reading, writing, and critical thinking skills.

UNITED STATES HISTORY

1542

Prerequisite: None
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 11

United States History is a Core 40 course that builds on previous studies of U.S. History. The first semester is a review of U.S. history from colonial times through the Civil War and Reconstruction and a survey from Reconstruction through World War I. The second semester is a survey from the 1920s to modern times. Students will study key economic, social, political, and cultural events of these periods as well as the people, groups, and movements that have an impact on the life of Indiana and the United States. There is an emphasis on reading, writing, and critical thinking skills.

UNITED STATES GOVERNMENT

1540

Prerequisite: None
1 Semester; 1 Credit
A Core 40, THD and AHD course
Grade Level: 11-12

United States Government is a course that focuses on the founding principles and beliefs of American government. Students will study the structure and powers of government, the rights and responsibilities of citizens, and how citizens acquire political beliefs. Students will evaluate primary and secondary sources in order to articulate and defend positions on political issues.

ECONOMICS

1514

Prerequisite: None
1 Semester; 1 Credit
A Core 40, THD and AHD course
Grade Level: 11-12

Economics is the study of the allocation of scarce resources among unlimited needs. Students will study how different economic systems and ideologies answer the basic economic questions, how prices are determined, and the role of taxes, international trade, and the basics of investing.

PSYCHOLOGY

1532

Prerequisite: None

1 Semester; 1 Credit

Elective for Core 40, THD and AHD course

Grade Level: 10- 12

Psychology Honors is a survey of the scientific study of behavior and mental processes of humans and other animals. Psychology will help you become more aware of your actions and the actions of others.

Areas of study include: The Scientific Method, The Stages of Development, Cognition, Personality, Assessment and Mental Health, the Biological Bases of Behavior and Socio-Cultural Dimensions of Behavior. Dual credit option.

SCIENCE

BIOLOGY I

3024

Prerequisite: None
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 9

The course will explore topics in biochemistry (elements and compounds as they relate to living organisms), cell structure, developmental biology, organism structure and system regulation, genetics, ecology and evolution. Course activities include lecture, lab activities, video presentations, demonstrations and student projects. Students will be required to complete the Core 40 test as prescribed by the state of Indiana as part of the assessment activities.

ADVANCED BIOLOGY II

3026

Prerequisites: Biology I
2 semesters, 2 credits
A Core 40, THD and AHD course
Grade Level: 11, 12

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

INTEGRATED CHEMISTRY PHYSICS

3108

Prerequisite: Alg I, but may be taken concurrently
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 9

Integrated Chemistry-Physics is a laboratory-based course in which students explore fundamental chemistry and physics principles. Students enrolled in this course examine, through the process of scientific inquiry, the structure and properties of matter, chemical reactions, forces, motion, and the interactions between energy and matter. Working in a laboratory environment, students will reinforce lecture material.

EARTH AND SPACE SCIENCE

3044

Prerequisite: Successful completion of Bio I
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 10-12

Earth and Space Science I is a course focusing on the study of the earth's layers, atmosphere, hydrosphere, and the structure and scale of the Universe. Students analyze and describe Earth's interconnected systems and examine how Earth's materials, landforms, and continents are modified across geological time. Through laboratory and field investigations, students understand the history and development of the Earth and space sciences.

CHEMISTRY I

3064

Prerequisite: Successful completion of Bio I & Alg I, preferably with a C or higher

Semesters; 2 Credits

A Core 40, THD and AHD course

Grade Level: 10-12

Chemistry I deals with topics such as matter, atomic structure, chemical bonding, radioactivity, chemical composition, reactions, behavior of gases and acids/bases. Laboratory experiments reinforce concepts and principles discussed in the classroom. Mathematical principles and problem solving skills are applied to many concepts. This course will provide the student with an adequate background for enrollment in college level chemistry.

PHYSICS

3084

Prerequisite: Successful completion Alg I, preferably with a C or higher

2 Semesters; 2 Credits

A Core 40, THD and AHD course

Grade Level: 11-12

This course emphasizes the theoretical and mathematical aspect of physics. Students will make extensive use of problem solving skills. It includes the study of vectors, mechanics, heat, light, sound, electricity, magnetism and nuclear energy. This course is highly recommended for college bound students who plan to major in a science/engineering area as part of a pre-professional program. Students will be required to do advanced levels of work.

HUMAN BODY SYSTEMS 5216 (HBS PLTW)

5216

Prerequisite: Principles of the Biomedical Sciences

2 semesters; 2 credits

Fulfills a Core 40 Science requirement for all diplomas

Grade Level: 10-12

Human Body Systems is a course designed to engage students in the study of basic human physiology and the care and maintenance required to support the complex systems. Using a focus on human health, students will employ a variety of monitors to examine body systems (respiratory, circulatory, and nervous) at rest and under stress, and observe the interactions between the various body systems. Students will use appropriate software to design and build systems to monitor body functions.

ANIMAL BODY SYSTEMS

3092

Prerequisite: Principles of the Biomedical Sciences

1 semesters; 1 credits

Fulfills a Core 40 Science requirement for all diplomas

Grade Level: 10-12

Animal Body Systems is a course designed to engage students in the study of comparative anatomy and physiology and the care and maintenance required to support complex systems. Using a focus on animal health, students will use technology and models to examine body systems at rest and under stress, and observe the interactions between the various body systems. Students will use appropriate software to design and build systems to monitor body functions.

PRINCIPLES OF BIOMEDICAL SCIENCES (PBS PLTW)

5218

Prerequisite: None

2 semesters; 2 credits

Elective Core 40, THD and AHD course

Grade Level: 10-12

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

MEDICAL INTERVENTIONS (MI PLTW)

5217

Prerequisite: Principles of the Biomedical Sciences

1 semesters; 1 credits

Fulfills a Core 40 Science requirement for all diplomas

Grade Level: 10-12

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

INTRODUCTION TO HEALTH SCIENCE CAREERS

5272

Prerequisites: None

2 semester course, 2 credits.

Grade Level: 9

Directed Elective for Core 40, THD and AHD

Introduction to Health Science Careers is an exploratory course in which student investigate all aspects of the health science industry, examine pathways in health science, and reflect on their own knowledge, skills and interests to begin to narrow the areas within health science they want to continue exploring, in preparation for further study in Health Science I.

HEALTH SCIENCE EDUCATION I

5282

Prerequisites: Intro to Health Sc

2 Semesters; 2 Credits

Elective for Core 40, THD and AHD

Grade Level: 11

Dual Credit

Health Science Education I is the first step to becoming a Certified Nursing Assistant. The content prepares the student to partake in an internship in a medical facility and includes: CPR/FA/AED, Infection control; How to take vital signs; Range of motion exercises; How to be a valuable and adaptable employee; Medical Terminology; Communication, teamwork and diversity skills for the workplace.

recording patient medical histories and symptoms, providing medicine and treatments, consulting doctors, operating and monitoring medical equipment, performing diagnostic tests, teaching patients and families how to manage illness or injury, and perform general health screenings. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from school to work in the field of nurse assisting, including self-analysis to aid in career selection, job seeking and job maintenance skills, personal management skills, and completion of the application process for admission into a post-secondary program. HOSA, the health science student organization, encourages development of leadership, communication, community service and health care related skills.

HEALTH SCIENCE EDUCATION II: Nursing: CNA

5284

Prerequisites: Health Science Education 1

2 Semesters; 6 credits

Elective for Core 40, THD and AHD

Grade Level: 12

Health Science Education II: Nursing is an extended laboratory experience at the student's choice of clinical site designed to provide students the opportunity to assume the role of nurse assisting and practice technical skills previously learned in the classroom, including information on the health care system and employment opportunities at a variety of entry levels, an overview of the health care delivery systems, health care teams and legal and ethical considerations. It prepares students with the knowledge, skills and attitudes essential for providing basic care in extended care facilities, hospitals and home health agencies under the direction of Indiana Department of Education Course Titles and licensed nurses. These knowledge and skills include

S.T.E.M. Science, Technology, Engineering and Mathematics

INTRO TO ENGINEERING DESIGN (IED PLTW)

Dual Credit 4812

Prerequisite: None

2 Semesters; 2 Credits

Elective for Core 40, THD and AHD

Grade Level: 9-10

Introduction to Engineering Design is an introductory course which develops student problem solving skills with emphasis placed on the development of three-dimensional solid models. Students will work from sketching simple geometric shapes to applying a solid modeling computer software package. They will learn a problem solving design process and how it is used in industry to manufacture a product. The Computer Aided Design System (CAD) will also be used to analyze and evaluate the product design. The techniques learned, and equipment used, is state of the art and is currently being used by engineers throughout the United States. Only those schools having a signed agreement with the national Project Lead the Way organization can use this course title. Dual credit option.

PRINCIPLES OF ENGINEERING (POE PLTW)

Dual Credit 4814

Prerequisite: Intro to Engineering Design

2 Semesters; 2 Credits

Elective for Core 40, THD and AHD

Grade Level: 10-11

Principles of Engineering is a board-based survey course designed to help students understand the field of engineering and engineering technology and its career possibilities. Students will develop

engineering problem solving skills that are involved in postsecondary education programs and engineering careers. They will also learn how engineers address concerns about the social and political consequences of technological change. Dual credit option.

ENGINEERING DESIGN AND DEVELOPMENT (EDD PLTW)

Dual Credit 4828

Prerequisite: Any two PLTW courses

2 Semesters; 2 Credits

Elective for Core 40, THD and AHD

Grade Level: 11-12

Engineering Design and Development is an engineering research course in which students work in teams to research, design, test, and construct a solution to an open-ended engineering problem. The product development life cycle and a design process are used to guide the team to reach a solution to the problem. The team presents and defends their solution to a panel of outside reviewers at the conclusion of the course. The EDD course allows students to apply all the skills and knowledge learned in previous pre-engineering courses. The use of 3D design software helps students design solutions to the problem their team has chosen. This course also engages students in critical thinking and problem-solving skills, time management and teamwork skills, a valuable set for students' future careers.

COMPUTER IN DESIGN AND PRODUCTION (CDP)

Prerequisite: None

2 Semesters; 2 Credits

Elective for Core 40, THD and AHD

Grade Level: 9

Computers in Design and Production is a course that specializes in using modern technological processes, computers, design, and production

systems in the production of products and structures through the use of automated production systems. Emphasis is placed on using modern technologies and on developing career related skills for electronics, manufacturing, precision machining, welding, and architecture career pathways.

Students apply ingenuity using tools, materials, processes, and resources to create solutions as it applies in the electronics, manufacturing, precision machining, welding, and architecture. The content and activities should be developed locally in accordance with available advanced technologies in the school. Course content should address major technological content related to topics such as: Architectural drawing and print design, design documentation using CAD systems; assignments involving the interface of CAD, CNC, CAM, and CIM technologies; computer simulation of products and systems; publishing of various media; animation and related multimedia applications; 3-D modeling of products or structures; digital creation and editing of graphics and audio files; control technologies; and automation in the modern workplace.

COMPUTER INTEGR MANUFACTURING (CIM PLTW)

Dual credit 4810

Prerequisite: Introduction to Engineering Design

2 Semesters; 2 Credits

Elective for Core 40, THD and AHD

Grade Level: 10-12

Computer Integrated manufacturing is a course that applies principles of rapid prototyping, robotics, and automation. This course builds upon the computer solid modeling skills developed in Introduction of Engineering Design. Students will use computer controlled rapid prototyping and CNC equipment to solve problems by constructing actual models of their three-dimensional designs. Students will also be introduced to the fundamentals of robotics and how this equipment is used in an automated manufacturing environment. Students will

evaluate their design solutions using various techniques of analysis and make appropriate modifications before producing their prototypes. Only those schools having a signed agreement with the national Project Lead the Way organization can use this course title. Schools involved in Project Lead the Way should use this course title in lieu of the Technology Education course “Computers in Design and Production Systems.”

WEB DESIGN (WEB DESIGN)

4574

Prerequisite: Computer Programming I

1 semester; 1 credit

Elective for Core 40, THD and AHD

Grade Level: Grade 11-12

Web Design is a course that provides instruction in the principles of web design using HTML/XHTML and current/emerging software programs. Areas of instruction include audience analysis, hierarchy layout and design techniques, software integration, and publishing. Instructional strategies should include peer teaching, collaborative instruction, project-based learning activates and school community projects.

COMPUTER SCIENCE 1 (PLTW)

4801

Prerequisite: None

1 Semesters; 1 Credits

Elective for Core 40, THD and AHD

Grade Level: 10- 12

Computer Science and Software Engineering PLTW is a new Project Lead the Way course that is under development within the PLTW Pathway-To-Engineering project for full implementation in 2014-2015. Students work in teams to develop computational thinking and solve

problems. The course aims to develop computational thinking, introduce computational tools that foster creativity, and build student awareness of the tremendous demand in all fields for computer specialists and professionals who have computational skills. The course engages students in considering issues raised by the present and future societal impact of computing. Students practice problem solving with structured activities and progress to open-ended projects and problems that require planning, documentation, and communication skills.

COMPUTER PROGRAMING I (COMP PROG I)

Dual Credit 4534

Prerequisite: Computer and Science Software Engineering and Algebra 1

1 Semester; 1 Credit

Elective for Core 40, THD and AHD

Grade Level: 11 - 12

Computer Programming I covers fundamental concepts of “programming are provided through explanations and effects of commands, and hands-on utilization of lab equipment to product correct output. This course introduces the structured techniques necessary for efficient solution of business-related computer programming logic problems and coding solutions into a high-level language. Includes program flowcharting, pseudo coding, and hierarchy charts as a means of solving these problems. The course covers creating file layouts, print charts, program narratives, user documentation, and system flowcharts for business problems. Reviews algorithm development, flowcharting, input/output techniques, looping, modules, selection structures, file handling, and control breaks. Offers students an opportunity to apply skills in a laboratory environment. Demonstrations of business problems and solutions techniques will be reviewed.

MANUFACTURING

INTRODUCTION TO MANUFACTURING

4784

Prerequisites: None
2 Semesters; 2 credits
Elective for Core 40, THD and AHD
Grade Level: 9-12

Introduction to Manufacturing is 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 & technological literacy. This understanding is developed through the study of the 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 to obtain resources and change them into industrial materials, industrial products and consumer products. Students will investigate the properties of engineered materials such as: metallics; polymers; ceramics; and composites. After gaining a working knowledge of these materials, students will study six major types of material processes: casting and molding; forming; separating; conditioning; finishing; and assembling.

WELDING TECHNOLOGY I (WELD TECH I)

Dual Credit 5776

Prerequisite: Intro to Eng/Design (IED) or Intro Adv Man (IAM)
2 semesters; 4 credits
Elective for Core 40, THD and AHD
Grade Level: Grade 10-12
Welding will take up two hours of the schedule.

Welding Technology I includes classroom and laboratory experiences that develop a variety of skills in oxy-fuel cutting and Shielded Metal

Arc welding. This course is designed for individuals who intend to make a career as a Welder, Technician, Sales, Designer, Researcher or Engineer. Emphasis is placed on safety at all times. OSHA standards and 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.

WELDING TECHNOLOGY II 5778 (WELD TECH II)

Dual Credit 5778

Prerequisite: Welding Technology I
2 semesters; 4 credits
Elective for Core 40, THD and AHD
Grade Level: Grade 10-12
Welding will take up two hours of the schedule.

Welding Technology II 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.

ARCHITECTURAL DRAFTING AND DESIGN I

5640

Prerequisites: None
2 Semesters; 2 credits
Elective for Core 40, THD and AHD
Grade Level: 10-12

Architectural Drafting and Design I gives students a basic understanding of the detailing skills commonly used by drafting technicians. Areas of

study include: lettering, sketching, proper use of equipment. This course includes the creation and interpretation of commonly used construction documents. Methods of geometric construction, three-dimensional drawing techniques, and sketching will be presented as well as elementary aspects of residential design and site work. Areas of emphasis will include print reading and drawing. This course also provides students with a basic understanding of the features and considerations associated with the operation of a computer-aided design (CAD) system. Students will gain valuable hands-on experience with Auto CAD. They will be expected to complete several projects relating to command topics.

AUTOMATION AND ROBOTICS I

5610

Prerequisites: Application and teacher approval
2 Semesters; 2 Credits
Elective for Core 40, THD and AHD
Grade Level: 9-12

Automation and Robotics I will be the first course in the new pathway in the current Manufacturing & Logistics Career Cluster. Students will gain skills to design and build basic robots that use sensors and actuators to solve specific problems and complete specific tasks. This will include introductory programming autonomous mode. Students will also learn to program a humanoid robot, tethered and in autonomous mode, able to react to specific circumstances and perform human-like tasks when programming is complete. This course will provide fundamental knowledge and skills in basic lasers, pneumatics, hydraulics, mechanics, basic electronics, and programmable logic controllers along with an understanding of career pathways in this sector.

BUSINESS MANAGEMENT AND ADMINISTRATION

PRINCIPALS OF BUSINESS MANAGEMENT

4518

Prerequisite: None
1 Semester; 1 Credit
Elective for Core 40, THD and AHD
Grade Level: 9-10

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

PERSONAL FINANCIAL RESPONSIBILITY

4540

Prerequisite: None
1 Semester; 1 Credit
Elective for Core 40, THD and AHD
Grade Level: 9-12

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

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

BUSINESS LAW & ETHICS

4560

Prerequisite: None

1 Semester; 1 Credit

Elective for Core 40, THD and AHD

Grade Level: 11-12

Business Law and Ethics provides an overview of the legal system in the business setting. Topics covered include: basics of the judicial system, contract, personal, employment and property law. Application of legal principles and ethical decision-making techniques are presented through problem-solving methods and situation analyses.

BUSINESS MARKETING & ENTREPRENEURSHIP

5237

Prerequisite: None

1 Semester; 1 Credit

Elective for Core 40, THD and AHD

Grade Level: 10

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

BUSINESS MATH

4512

Prerequisite: Algebra I

2 Semesters; 2 Credits

Elective for Core 40, THD and AHD

Grade Level: 10-12

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

INTRO TO COMMUNICATIONS: Digital Media

4790

Prerequisite: None

2 Semesters; 2 Credits

Elective for Core 40, THD and AHD

Grade Level: 9-10

Introduction to Communications is a course designed to provide a foundational knowledge of identifying and using modern communication to exchange messages and information. This course explores the application of the tools, materials, and techniques used to design, produce, use, and assess systems of communication. Students will produce graphic and electronic media as they apply communication technologies. This course will also explore the various technical processes used to link ideas and people through the use of electronic and graphic media. Major goals of this course include an overview of communication technology; the way it has evolved, how messages are designed and produced, and how people may profit from creating

information services and products. Students will explore mass media communication processes including radio and television broadcasting, publishing and printing activities, telecommunication networks, recording services, computer and data processing networks, and other related systems. Using the base knowledge student will use the design process to solve design projects in each communication area.

RADIO AND TELEVISION I

5986

Prerequisite: Intro to Comm (Digital Media)
2 Semesters; 2 Credits
Elective for Core 40, THD and AHD
Grade Level: 10-12

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

RADIO AND TELEVISION II

5992

Prerequisite: Radio and Television I
2 Semesters; 2 Credits
Elective for Core 40, THD and AHD
Grade Level: 11-12

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

PHYSICAL EDUCATION AND HEALTH

HEALTH AND WELLNESS

3506

Prerequisite: None

1 Semester; 1 Credit

A Core 40, THD and AHD course

Grade Level: 9-12

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

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

PHYSICAL EDUCATION I PHYSICAL EDUCATION II

3542

3544

Prerequisite: None

1 Semester; 1 Credit each

A Core 40, THD and AHD course

Grade Level: 9-12

Secondary Physical Education I & II continues the emphasis on health-related fitness and developing skills and habits necessary for a lifetime of activity, enjoyment, challenge, and social interactions. This course of studies provides students with opportunities to achieve and maintain a health-enhancing level of physical fitness and to increase their knowledge of fitness concepts. This program includes skill development and the application of rules and strategies of complex difficulty in at least six of the following different movement's forms: (1) health-related fitness activities (cardio respiration endurance, muscular strength and endurance, flexibility, and body composition); (2) aerobic exercise; (3) team sports; (4) individual and dual sports; (5) outdoor pursuits; (6) aquatics; (7) recreational games. Ongoing assessments include both written and performance-based skill evaluations.

WORLD LANGUAGES

SPANISH I

2120

**Prerequisite: Successful completion of English
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 9-12**

The curriculum is designed to provide basic knowledge of introductory grammar and its usage, both oral and written; develop conversational abilities; elicit correct Spanish pronunciation by studying the Spanish phonetic system; develop elementary composition skills; and provide insights into many aspects of Central, Latin America, and Spanish and Hispanic American cultures.

SPANISH II

2122

**Prerequisite: Successful completion of English
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 9-12**

Spanish II continues to develop the basic language skills learned in Spanish I. Students are expected to master vocabulary used in everyday situations. Advanced grammatical structures and new vocabulary are introduced to help students develop their conversational skills. The course emphasizes original thinking in the language. Cultural differences and similarities will also be studied.

SPANISH III

2124

**Prerequisite: Successful completion of English
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 11-12**

The mastery of advanced grammar and vocabulary is emphasized as students become more proficient in listening, speaking, reading, and writing. Selections from Spanish and Latin American literature are studied. Students participate in cultural activities designed to increase awareness and understanding of Hispanic cultures.

French I and II, German I and II are currently only available online.

FINE ART

ADVANCED STRINGS

4166

Prerequisite: None
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 9-12

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

STRINGS

4172

Prerequisites: Beginning Orchestra
2 Semester; 2 Credit
A Core 40, THD and AHD course
Grade Level: 9-12

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

SYMPHONIC CONCERT BAND

4168

Prerequisite: Prerequisite: None
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 9-12

Intermediate Concert Band is based on the Indiana Academic Standards for High School Instrumental Music. This course includes a balanced comprehensive study of music that develops skills in the psychomotor, cognitive, and affective domains. Ensemble and solo activities are designed to develop elements of musicianship including tone production, technical skills, intonation, music reading skills, listening skills, analyzing music, studying historically significant styles of literature, and integration of other applicable disciplines. Students study a varied repertoire of developmentally appropriate concert band literature and develop the ability to understand and convey the composer's intent in performance of music. Time outside of the school day may be scheduled for rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside of the school day that support and extend learning in the classroom • Recommended Grade Level: 10, 11, or 12 • Recommended Prerequisites: Beginning Concert Band • Credits: a 1-semester course for 1 credit. The nature of this course allows for successive semesters of instruction at an advanced level provided that defined proficiencies and content standards are utilized. • Fulfills requirement for 1 of 2 Fine Arts credits for Core 40 with Academic Honors diploma • Counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

JAZZ ENSEMBLE

4164

Prerequisite: Prerequisite: None
2 Semesters; 2 Credits
A Core 40, THD and AHD course
Grade Level: 9-12

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

INTRODUCTION TO TWO-DIMENSIONAL ART

4002

Prerequisite: None

1 Semester; 1 Credit

A Core 40, THD and AHD course

Grade Level: 9-12

Introduction to Two-Dimensional Art is a sequential learning experience that encompasses art history, art criticism, aesthetics, and production and leads 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.

ADVANCED TWO-DIMENSIONAL ART

4004

Prerequisite: 2 D art

1 Semester; 1 Credit

A Core 40, THD and AHD course

Grade Level: 9-12

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

skills. They identify ways to utilize and support art museums, galleries, studios, and community resources

INTRODUCTION TO THREE-DIMENSIONAL ART

4002

Prerequisites: Introduction to Two-Dimensional Art

Semester; 1 Credit 1

A Core 40, THD and AHD course

Grade Level: 9-12

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

ADVANCED THREE-DIMENSIONAL ART

4006

Prerequisites: Introduction to 2D and 3D art

Semester; 1 Credit 1

A Core 40, THD and AHD course

Grade Level: 9-12

Advanced Three-Dimensional Art is a course based on the Indiana Academic Standards for Visual Art. Students in this course build on the sequential learning experiences of Introduction to Three-Dimensional Art that encompass art history, art criticism, aesthetics, and production

and lead to the creation of portfolio quality works. Students explore historical and cultural background and connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; create three-dimensional works of art, reflect upon the outcomes, and revise their work; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational

CERAMICS

4040

Prerequisite: Intro to Two-Dimensional Art

1 Semester; 1 Credit

A Core 40, THD and AHD Course

Grade Level: 9-12

Ceramics is a sequential learning experience that encompasses art history, art criticism, aesthetics, and production and leads 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 process. 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.

DRAWING

4060

Prerequisite: Intro to Two-Dimensional Art

1 Semester; 1 Credit

A Core 40, THD and AHD course

Grade Level: 9-12

Drawing I is a sequential learning experience that encompasses art history, art criticism, aesthetics, and production and leads to the

creation of portfolio quality works. Students create drawings utilizing processes such as sketching, rendering, contour, gesture, and perspective drawing and use a variety of media such as pencil, chalk, pastels, charcoal, and pen and ink. They reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries and studios, and identify art-related careers.

PAINTING

4064

Prerequisite: Intro to Two-Dimensional Art

1 Semester; 1 Credit

A Core 40, THD and AHD course

Grade Level: 9-12

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

DIGITAL DESIGN

4082

Prerequisite: Intro to Two-Dimensional Art

1 Semester; 1 Credit

A Core 40, THD and AHD course

Grade Level: 9-12

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

PHOTOGRAPHY

4062

Prerequisites: Introduction to Two-Dimensional

1 Semester; 1 Credit

A Core 40, THD and AHD course

Grade Level: 10-12

Photography is a course based on the Indiana Academic Standards for Visual Art. Students in photography engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works, creating photographs, films, and videos utilizing a variety of digital tools and dark room processes. They reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed

judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries, and studios, and identify art-related careers.

SCULPTURE

4044

Prerequisites: Introduction to Two-Dimensional Art (L),

Introduction to Three-Dimensional Art

1 Semester; 1 Credit

A Core 40, THD and AHD course

Grade Level: 9-12

Sculpture is a course based on the Indiana Academic Standards for Visual Art. Students in sculpture engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production. Using materials such as plaster, clay, metal, paper, wax, and plastic, students create portfolio quality works. Students at this level produce works for their portfolios that demonstrate a sincere desire to explore a variety of ideas and problems. They create realistic and abstract sculptures utilizing subtractive and additive processes of carving, modeling, construction, and assembling. They reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills. Students utilize the resources of art museums, galleries, and studios, and identify art-related careers.

GRAPHIC DESIGN AND LAYOUT

Prerequisites: Digital Design

2 Semesters 2 Credits

A Core 40, THD and AHD course

Grade Level: 9-12

Graphic Design and Layout includes organized learning experiences that incorporate a variety of visual art techniques as they relate to the design and execution of layouts and illustrations for advertising, displays, promotional materials, and instructional manuals.

Instruction also covers advertising theory and preparation of Indiana Department of Education 130 High School Course Titles and Descriptions copy, lettering, posters, and artwork in addition to incorporation of photographic images. Communication skills will be emphasized through the study of effective methods used to design commercial products that impart information and ideas. Advanced instruction might also include experiences in various printing processes as well as activities in designing product packaging and commercial displays or exhibits.

COLLEGE AND CAREER/WORKFORCE

JOBS FOR AMERICAN GRADUATES: JAG)

0522

Prerequisite: Instructor Approval
2 Semester Credits
Elective for Core 40, THD and AHD
Grade Level: 11-12

JAG serves young people with barriers to success. The more barriers to success that a young person might have, the more he or she is considered 'at-risk' of graduating from high school or having a successful transition from school to an entry level job that leads to a career. After more than two decades of operation, JAG has proved to be one of the most cost-effective and successful state-level strategies for tackling high dropout rates, low academic performance, youth unemployment, and other critical issues related to at-risk youth.

PREPARING FOR COLLEGE AND CAREERS

5394

Prerequisite: None
1 Semester; 1 Credit
Elective for Core 40, THD and AHD
Grade Level: 9

Preparing for College and Careers addresses the knowledge, skills, and behaviors all students need to be prepared for success in college, career, and life. The focus of the course is the impact of today's choices on tomorrow's possibilities. Topics to be addressed include twenty-first century life and career skills; higher order thinking, communication, leadership, and management processes; exploration of personal aptitudes, interests, values, and goals; examining multiple life roles and responsibilities as individuals and family members;

planning and building employability skills; transferring school skills to life and work; and managing personal resources. This course includes reviewing the 16 national career clusters and Indiana's College and Career Pathways, in-depth investigation of one or more pathways, reviewing graduation plans, developing career plans, and developing personal and career portfolios. A project based approach, including computer and technology applications, cooperative ventures between school and community, simulations, and real life experiences, is recommended.

ENTREPRENEURSHIP AND NEW VENTURES

5966

MUST APPLY THE APRIL OF PREVIOUS YEAR

Prerequisite: Admitted into program
2 Semesters; 2 Credits
Elective for Core 40, THD and AHD
Grade Level: 12

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.

PRE-INTERNSHIP SEMINAR

5394

**Prerequisite: None- Required class for Internship Placement
1 Semesters; 1 Credit
Elective for Core 40, THD and AHD
Grade Level: 11-12**

Students planning on entering an internship are required to take this seminar class. The class will consist of preparing for life beyond high school-filling out the FAFSA, college applications, resume, and cover letter-and other 21st Century skills needed to survive in the real world. Students will learn proper interview techniques and about lasting effects of first impressions. Students will also learn about how to handle situations that may arise during internships and reporting process.

WORK BASED LEARNING Varies (INTERNSHIP)

**Prerequisite: Preparing for College and Careers (5394)
Direct Elective for Core 40, THD and AHD
Grade Level: 11-12**

Work Based 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 students' skills and knowledge in their chosen career path or furthers their study within the area of interest. A standards based training plan is developed by the student, teacher, and workplace mentor to guide the student's work based learning experiences and assist in evaluating achievement and performance, whether WBL is a stand-alone course or a component of a discipline-specific CTE course. In the stand-alone WBL courses, students have the opportunity to apply the concepts, skills, and dispositions learned in previous coursework in their pathways in real world business and industry settings. Therefore, at least two courses in a student's pathway would be prerequisite to the student enrolling in the stand-alone WBL courses.

- **5974 Work Based Learning, Multiple Pathway**
- **5975 Work Based Learning, Advanced Manufacturing and Engineering**
- **5260 Work Based Learning, Business and Marketing**
- **5207 Work Based Learning, Health Sciences**
- **5892 Work Based Learning, Trade and Industry**

Students are monitored in their experiences by the content-related CTE teacher or a CTE teacher needs to be the teacher for the comprehensive course. Articulation with postsecondary programs is encouraged.

Dual Credit Courses

Students must pass the Accuplacer test or meet qualifying GPA requirements and receive no less than a C in the course to obtain dual credit.

Academic Dual Credits

ENGLISH

Eng111 College Writing I: Composition I

-----Replaces semester A of either English 11 or English 12

Eng 112 College Writing II -Composition II

-----Replaces semester B of either English 11 or English 12

Eng 202 Creative 12 Writing

-----Replaces any semester of either English 11 or English

Eng 206 Intro to Literature

-----Replaces semester A of either English 11 or English 12

MATH

M136 College Algebra

-----Replaces Pre-Calculus

M137 Trigonometry

-----Replaces non-dual credit Trigonometry

M211 Calculus

SOCIAL STUDIES

Hist 151 Survey of American History I

----Replaces US History Sem A

Hist 152 Survey of American History II

----Replaces US History Sem B

Pols 101 Intro to American Government and Politics

----Replaces Government

SCIENCE

Chem 101 College Chemistry

-----Must pass Chemistry I with a minimum of a C.

Bio 101 Advanced Biology

----Must pass Biology with a minimum of a C.

Pathway Dual Credits

ADVANCED MANUFACTURING

MPro 101 Intro to Plant Floor and CNC

MPro 106 Intro to the Workplace Safety

MPro 122 Mechatronics and Electrical Systems

MPro 201 Lean Manufacturing

ENGINEERING

PLTW 101 Design Technology

PLTW 104 Mechanical Graphics

PLTW ADMF 116 Auto and Robotic Manufact

WELDING

WELD 108 Shielded Metal Arc I Welding

WELD 109 Oxy-Fuel Gas Welding

WELD 206 Shielded Metal Arc II Welding

WELD 207 Gas Metal Arc Welding

HEALTH SCIENCE/CNA CERT

HLHS 101 Medical Terminology

HLHS 102 Essentials of Anatomy and Phys

HLHS 107 CNA Preparation