# Muncie Community Schools



**MUNCIE CENTRAL HIGH SCHOOL**

M Placing Learners First

# Curriculum Handbook
## 2025 - 2026
*Updated January 2025*

# Muncie Community Schools

## INTRODUCTION

This Curriculum Handbook is published to assist students and parents in planning student programs that will prepare them for post-secondary study or the workplace. The format provides detailed information on grade levels, content, pre-course recommendations, and descriptions for each course.

Before entering high school, students will take a career interest inventory and, in consultation with the school counselor, will develop a Graduation Pathway Plan. While this plan may be altered as the student progresses through school, the course of study selected by the student should align with a career pathway and be realistic in terms of academic and technical competencies.

The four-digit number listed corresponds to the code number and course title on the high school course selection sheet.

Each year during the course scheduling process, students meet with school counselors to establish selections and programs for the subsequent year.  Parents/guardians are encouraged to contact the guidance office for input into their child's course selections to ensure participation in the most valuable and challenging coursework offered by the Muncie Community Schools that will effectively serve each student's needs.

Students and parents should utilize the information in this handbook in order to fully understand graduation/credit requirements before developing a graduation pathway plan.

<p style="text-align: center;">**<mark>GRADUATION REQUIREMENTS - CLASS OF 2025 - 2028</mark>**
**GRADUATION PATHWAY DIPLOMA**</p>

Each student in the <mark>Class of 2025 through 2028</mark> is required to meet the following in order to graduate:

1. **High School Diploma – Complete all the required and elective credit and curricular requirements for one of the following diploma options:**
   a. Core 40 Credit Outline
   b. Academic Honors Credit Outline
   c. Technical Honors Credit Outline
   d. General Credit Outline (Requires Opt-Out Process)

   <mark>Students are required to earn a minimum of forty (40) credits to earn a Muncie Central High School diploma.</mark>

   <mark>Starting with the Class of 2029, students will be required to earn a minimum of forty-two (42) credits to earn a Muncie Central High School diploma. Students in this cohort will still be required to complete the following categories, including employability skills and postsecondary readiness competencies.</mark>

1. **Employability Skills:** The student through a Project-based (PBS), Service-based (SBL), or Work-based (WBL) learning experience must demonstrate the Indiana Department of Workforce Development's Employability Skills Benchmarks:  Career Mindsets, Self-Management Skills, Learning Strategies, Social Skills, and Workplace Skills. The employability skills experience must be validated by a student _work product_ and _school approval_.

   Student must **_complete at least one_** of the following experiences:

| | | EMPLOYABILITY EXPERIENCE OR ACTIVITY | WORK PRODUCT |
|---|---|---|---|
| 1 | WBL | Student Employment (75-100 Hours) | Work Letter from Employer |
| 2 | WBL | Work-Based Learning Class (Paid Position) | Workplace Skills Evaluation |
| 3 | WBL | Career Exploration Internship (Non-Paid) | Workplace Skills Evaluation |
| 4 | WBL | CTE Programs with Internship Experience | Internship Workplace Skills Evaluation |
| 5 | WBL | Teen Works - Summer Work Experience | Supervisor Evaluation |
| 6 | WBL | JROTC (Minimum 2 semesters) | Rubric & Recommendation |
| 7 | WBL | Cadet Teaching | Supervisor Evaluation |
| 8 | WBL | JAG - Jobs for America's Graduates (2 semesters) | Resume/Cover Letter |

| 9 | SBL | Sports Participation | Rubric & Recommendation |
|---|---|---|---|
| 10 | SBL | Band or Choir Participation | Rubric & Recommendation |
| 11 | SBL | Key Club | Rubric & Recommendation |
| 12 | SBL | Peer Tutoring | Rubric & Recommendation |
| 13 | SBL | Student Council or Class Officer | Reflection of Experience |
| 14 | SBL | National Honor Society | Rubric & Recommendation |
| 15 | SBL | Recycling Club | Rubric & Recommendation |
| 16 | SBL | Community Service Class (1 Semester) | Rubric & Recommendation |
| 17 | PBL | PLTW Biomedical (2nd Year: MI and BI) | Student project report or PPT |
| 18 | PBL | PLTW Civil Engineering & Architecture | Student project report or PPT |

The above list is not all-inclusive as there may be additional activities or programs identified as options that students can use for demonstrating employability skills.

1. **Postsecondary-Ready Competencies:** The student is required to demonstrate his or her readiness to transition from high school to be ready to enter college, career training, workplace, or entrance into the military by completing one of the options listed below.

Students must ***complete one*** of the following:
Postsecondary-Ready Competency Options

| 1 | Honors Diploma | Complete all of the requirements for Academic Honors or Technical Honors |
|---|---|---|
| 2 | SAT | Reading/Writing=480, Math=530 (Must meet individual scores in each subject) |
| 3 | ACT | English=18, Reading=22, Math=22, Science=23 (Student must earn the score in 2 of the 4 subjects: Reading or English and Math or Science) |
| 4 | ASVAB | Earn a minimum score of 31 (AFQT) on the Armed Services Vocational Aptitude Battery |
| 5 | Industry Certification | Achieve a passing score on any industry certification test on the approved Department of Workforce Development list (updated annually by DWD) |
| 6 | Career & Technical Education Pathway Concentrator | Earn a C average in the specified two (2) capstone courses in a Career and Technical Education pathway program |
| 7 | Advanced Placement Courses | Earn a C average in at least three (3) Advanced Placement courses |

| 8 | Dual Credit | Earn a C average in at least three (3) dual credit courses. One of the three courses must be in a core content area (CTL) or all three courses must be part of a defined Career-Technical Education Pathway |
|---|---|---|

## Career & Technical Education Explanations:

- Career & Technical Education (CTE) Pathway is a sequence of classes and activities focused on a specific career field. CTE Pathways allows students the opportunity to learn more about a specific career field. Students with a career focus before high school graduation are better prepared to select the right post-secondary option: Apprenticeship, Community College, University, Certification or Technical Training, Military Service, or other.
- CTE Concentrator is a student who completes the two (2) capstone or final classes in a CTE sequence of classes focused on a specific career field.
- A CTE Pathway *may* include opportunities for the student to:
  - o Earn dual college credits in a CTE Pathway
  - o Earn Industry Certification
  - o Participate in an embedded internship or work-based learning experience

## Meeting Graduation Pathway Requirements

- Students in the 2025 graduating class and beyond may qualify for a waiver from meeting the Postsecondary Readiness Competency provided the student completes all credit requirements, Employability Skills requirements, and meets the conditions for the Graduation Pathway Waiver.
- (See Graduation Pathway Postsecondary Waiver Requirements)

## Graduation Requirements to Come

- Beginning with the 2028 cohort, students must earn one credit in personal financial responsibility.
- Students in the class of 2029 will be required to complete the requirements for the new high school diploma. Students may also pursue one of the enrollment, enlistment and enlistment/service seals. These requirement changes are explained in the graphic below.

# CURRENT & FUTURE INDIANA DIPLOMA: COMPARISON

**INDIANA DEPARTMENT of EDUCATION**

The new diploma structure includes a base (minimum requirements) for every student, plus the opportunity to earn readiness seals aligned with their unique path. Students are encouraged to seize this flexibility by personalizing their high school experience. The new seals provide additional intentionality to maximize readiness and are designed to be permeable, allowing students to update their graduation plan and pivot, if their original interests and goals change. Students who do not earn a seal must still complete components 2 and 3 of Graduation Pathways.

| | CURRENT — INDIANA CORE40 | | FUTURE — NEW INDIANA DIPLOMA | |
|---|---|---|---|---|
| **ENGLISH** | **8 CREDITS** | | **8 CREDITS** | • 2 credits: English 9<br>• 1 credit: Communications-focused course<br>• 5 additional English credits |
| **MATH** | **6 CREDITS** | • 2 credits: Algebra I<br>• 2 credits: Geometry<br>• 2 credits: Algebra II | **7 CREDITS** | • 2 credits: Algebra I<br>• 1 credit: Personal Finance<br>• 4 additional math credits |
| **SCIENCE, TECHNOLOGY, AND ENGINEERING** | **6 CREDITS** | • 2 credits: Biology I<br>• 2 credits: Chemistry 1, Physics I, or Integrated Physics<br>• 2 credits: Any Core 40 science course | **7 CREDITS** | • 2 credits: Biology I<br>• 1 credit: Computer Science<br>• 2 additional science credits<br>• 2 STEM-focused credits |
| **SOCIAL STUDIES** | **6 CREDITS** | • 2 credits: U.S. History<br>• 1 credit: U.S. Government<br>• 1 credit: Economics<br>• 2 credits: World History/Civilization or Geography/History of the World | **5 CREDITS** | • 2 credits: U.S. History<br>• 1 credit: U.S. Government<br>• 2 credits: World Perspectives (Flexible options, including advanced world language or world-focused social studies courses) |
| **PE/HEALTH** | **3 CREDITS** | • 2 credits: Physical Education<br>• 1 credit: Health & Wellness | **2 CREDITS** | • 1 credit: Physical Education<br>• 1 credit: Health & Wellness |
| **DIRECTED ELECTIVES** | **5 CREDITS** | Any combination of World Languages, Fine Arts, and/or Career & Technical Education | **N/A** | |
| **PERSONALIZED ELECTIVES** | **6 CREDITS** | | **12 CREDITS** | Students are encouraged to utilize the new readiness-seals to align these personalized electives with their unique goals. Personalized electives can include a variety of courses, such as CTE, Performing or Fine Arts, and World Languages. |
| **COLLEGE & CAREERS** | **N/A** | | **1 CREDIT** | • 1 credit: Preparing for College & Careers |
| **TOTAL** | **40 CREDITS** | | **42 CREDITS** | |

## Hoosier high school students have the opportunity to earn approximately 60 credits.

# BLUEPRINT FOR SUCCESS: READINESS-SEALS

**INDIANA DEPARTMENT of EDUCATION**

Readiness seals are designed to be permeable, allowing students to update their graduation plan and pivot, if their original interests and goals change. Although seals are optional, students are encouraged to utilize the blueprints below to focus their flexible credits into a connected pathway that aligns with their future goals. Students may earn one or multiple seals. Graduation Pathways requirements will be satisfied through completion of any seal.

| | ENROLLMENT | EMPLOYMENT | ENLISTMENT & SERVICE |
|---|---|---|---|
| **HONORS SEAL** | • Complete at least 4 World Language and 6 Social Studies credits<br><br>• Complete at least 8 Math credits<br> ○ Algebra I plus Geometry, Algebra II, and Pre-Calculus or any advanced math credits aligned to their course of study<br><br>• Complete at least 6 Science credits<br> ○ Biology I plus Chemistry and Physics or any advanced lab science credits aligned to their course of study<br><br>• Earn a C or higher in all courses and earn a cumulative B average<br><br>• Complete one of the following:<br> ○ Earn 4 credits in AP, IB, or Cambridge courses and take corresponding exams<br> ○ Earn 6 college credits<br> ○ Score a 1250 on the SAT or a 26 on the ACT<br> ○ Earn two of the following:<br>  ■ At least 3 college credits<br>  ■ 2 credits in AP courses and take corresponding exams<br>  ■ 2 credits in IB courses and take corresponding exams<br>  ■ 2 credits in Cambridge courses and take corresponding exams | • Complete one of the following:<br> ○ A market-driven credential of value* aligned to a specific occupation<br> ○ 3 courses in a Career and Technology Education (CTE) pathway<br> ○ An approved career preparation experience aligned to Indiana's CSA program, or<br> ○ An approved, locally-created pathway<br><br>• Complete 150 hours of work-based learning (may include multiple experiences that are paid, unpaid, on-site, or simulated)<br><br>• Demonstrate skill development in Communication, Collaboration, and Work Ethic<br><br>• Meet attendance goal | • Complete one of the following:<br> ○ Introduction to Public Service course or approved locally-created equivalent<br>  ■ Emphasis on developing an awareness of the physical standards and character required for service<br> ○ One year of JROTC in high school<br><br>• Achieve a score of 31 on the ASVAB and complete one of the following:<br> ○ All three components of the Career Exploration Program<br> ○ A career exploration tool approved by IDOE<br><br>• Meet attendance goal<br><br>• Demonstrate skill development in Communication, Collaboration, and Work Ethic<br> ○ Externally verified through a mentorship experience with current military personnel, veterans, or other public safety professionals |
| **HONORS PLUS SEAL** | Earn the Honors Enrollment Seal, **plus:**<br><br>• Earn a credential of value* that may include, for example:<br> ○ Associate degree;<br> ○ Technical Certificate;<br> ○ Indiana College Core;<br> ○ AP Scholar with Distinction;<br> ○ Cambridge AICE Diploma; or<br> ○ IB Diploma<br><br>• Complete at least 75 hours of work-based learning (may include multiple experiences that are paid, unpaid, on-site, or simulated)<br><br>• Demonstrate skill development in the following areas: Communication, Collaboration, and Work Ethic | Earn the Honors Employment Seal, **plus:**<br><br>• Earn a market-driven credential of value* that may include, for example:<br> ○ Associate degree;<br> ○ Technical Certificate;<br> ○ Indiana College Core; or<br> ○ Advanced industry certificate<br><br>• Complete additional work-based learning (total of 650 hours in one or more experiences) that may include, for example:<br> ○ Pre-Apprenticeship<br> ○ Modern Youth Apprenticeship<br><br>• Demonstrate skill development in Communication, Collaboration, Work Ethic, and any additional skills determined locally | Earn the Honors Enlistment Seal, **plus:**<br><br>• Complete one of the following:<br> ○ Achieve a score of 50 or higher on the ASVAB<br> ○ Enrollment in ROTC at the collegiate level<br> ○ Acceptance to a service academy<br><br>• Demonstrate excellence in leadership through one of the following:<br> ○ Completion of at least 100 hours of public service;<br> ○ Holding a leadership role in a co/extracurricular activity;<br> ○ Completion of two seasons of a team-based physical sport or activity |

*Note: the credential of value levels are currently being determined by business and industry.

in.gov/doe

# Career and Technical Education Pathway Options

A **CTE Concentrator** is a student who completes two (2) advanced or final classes in a career and technical education sequence of classes focused on a specific career area.  A CTE Pathway *may* include opportunities for the student to earn dual credits, industry certification, and participation in an internship.

| Career Cluster | Career Pathway | Principles Course | Concentrator Courses | Cert. | Loc. |
|---|---|---|---|---|---|
| **Architecture & Construction** | **Carpentry** | Principles of Construction Trades | Yr 1: General Carpentry & Framing and Finishing<br>Yr 2: Construction Trades: Construction Capstone | NCCER | MACC |
| | **Electrical** | | Yr 1: Electrical Fundamentals & Advanced Electrical<br>Yr 2: Construction Trades: Electrical Capstone | NCCER | MACC |
| **STEM** | **Engineering** | Intro Engineering & Design | Principles of Engineering<br>Civil Engineering & Design | | MCHS |
| **Arts, AV Technology and Communications** | **Digital Design** | Principles of Digital Design | Yr 1: Digital Design Graphics & Graphic Design and Layout<br>Yr 2: Digital Design Capstone | | MACC |
| **Business Management and Administration** | **Business Administration** | Principles of Business Management | Management Fundamentals<br>Accounting Fundamentals | | MCHS |
| **Education & Training** | **Early Childhood Education** | Principles of Early Childhood Education | Yr 1: Early Childhood Education Curriculum & Early Childhood Education Guidance<br>Yr 2: Early Childhood Education Capstone | CDA | MACC |
| | **Education Careers** | Principles of Teaching | NLPS Child and Adolescent Teaching and Learning | | MCHS |
| **Engineering & Manufacturing Systems** | **Purdue Engineering Technology** | None | Purdue Engineering Technology Advanced CTE College Credit I & II | | MACC @ MCHS |
| | **Advanced Manufacturing** | Principles of Advanced Manufacturing | Yr 1: Advanced Manufacturing Technology & Mechatronics<br>Yr 2: Automation & Robotics Capstone | AWS | MACC @ MCHS |
| | **Welding** | Principles of Welding Technology | Yr 1: Shielded Metal Arc Welding & Gas Welding Processes<br>Yr 2: Welding Technology Capstone | AWS | MACC |
| **Health Sciences** | **Health Science – Nursing** | Principles of Healthcare | Yr 1: Medical Terminology & Certified Nursing Assistant<br>Yr 2: Healthcare Capstone | CNA License | MACC |
| | **Health Science – Dental Careers** | Principles of Dental Careers | Yr 1: Dental Careers Fundamentals & Advanced Dental Careers<br>Yr 2: Dental Careers Capstone | ISDH Dental Radiography | MACC |
| | **Emergency Medical Technician** | Principles of Healthcare | Yr 1: Medical Technology, Emergency Medical Technician | EMT | MACC |
| | **Health Science – Biomedical PLTW** | Principles of Biomedical Science | Yr: 1 Human Body Systems & Medical Interventions<br>Yr 2: Biomedical Innovations, Principles of Healthcare, Medical Terminology | | MACC |

| | | | | | |
|---|---|---|---|---|---|
| **Human Services** | **Cosmetology** | Principles of Barbering and Cosmetology | Yr 1: Barbering and Cosmetology Fundamentals, Advanced Cosmetology<br>Yr 2: Barbering and Cosmetology Capstone | State License | MACC |
| | **Human & Social Services** | Principles of Human Services | Understanding Diversity Relationships and Emotions | | MCHS |
| **Hospitality and Tourism** | **Nutrition Science** | Principles of Culinary and Hospitality | NLPS Nutrition Nutrition Planning and Therapy | | MCHS |
| | **Hospitality Management** | | NLPS Nutrition Hospitality Management | | MCHS |
| | **Culinary Arts** | | NLPS Nutrition Culinary Arts | | MCHS |
| **Information Technology** | **Cybersecurity** | Principles of Computing | Cybersecurity Fundamentals Advanced Cybersecurity | | MCHS |
| **Public Safety** | **Criminal Justice** | Principles of Criminal Justice | Yr 1: Law Enforcement Fundamentals & Corrections and Cultural Awareness<br>Yr 2: Criminal Justice Capstone | | MACC |
| | **Fire and Rescue** | Principles of Fire & Rescue | Yr 1: Fire Fighting Fundamentals & Advanced Fire Fighting<br>Yr 2: Advanced Fire Fighting | EMR F F1 | MACC |
| **Transportation & Logistics** | **Automotive** | Principles of Automotive Service | Yr 1: Brake Systems & Steering and Suspension<br>Yr 2: Automotive Service Capstone | ASE | MACC |

# Core 40 Credit Outline – 40 Credits

| | |
|---|---|
| **English/Language Arts** | **8 Credits** |
| | English 9-12 fulfill this requirement<br>Other English courses may fulfill this requirement. |
| **Mathematics** | **6 Credits** (in grades 9-12) |
| | Algebra I, Algebra II, Geometry, Pre-Calculus/Trigonometry, Calculus,<br>Probability & Statistics, Finite Math |
| **Quantitative Reasoning** | For the Core 40 diploma, students must take a mathematics course or alternate quantitative reasoning course each year they are enrolled in high school. |
| **Science** | **6 Credits** |
| | 2 credits: Biology I<br>2 credits: Chemistry I, Physics I, or Integrated Chemistry/Physics<br>2 credits: any Core 40 science course |
| **Social Studies** | **6 Credits** |
| | 2 credits: U.S. History<br>1 credit: U.S. Government<br>1 credit: Economics<br>2 credits: World History/Civilization or Geography/History of the World |
| **Physical Education** | **2 Credits** |
| **Health & Wellness** | **1 Credit** |
| **Directed Electives** | **5 Credits** |
| | World Languages:  Latin, Spanish, Japanese<br>Fine Arts: Music, Theatre, Visual Arts, Mass Media<br>Career and Technical Education Pathway Courses |
| **Electives** | **6 Credits** |
| **TOTAL** | **40 Credits – Minimum Required for an MCS Diploma** |

# Core 40 with Academic Honors Credit Outline – 47 Credits

| | |
|---|---|
| **English/Language Arts** | **8 Credits** |
| | English 9 –12 fulfill this requirement<br>Other English courses may fulfill this requirement |
| **Mathematics** | **8 Credits (in grades 9-12)** |
| | Algebra I, Algebra II, Geometry, Pre-Calculus/Trigonometry, Calculus, Probability & Statistics, Finite Math<br>If a student has completed a middle school curriculum that is equivalent to high school Algebra I and is placed in Geometry, that student must earn only six (6) high school mathematics credits. |
| **Quantitative Reasoning** | For the Academic Honors Diploma students must take a mathematics course or a quantitative reasoning course each year they are enrolled in high school. |
| **Science** | **6 Credits** |
| | 2 credits: Biology I<br>2 credits: Chemistry I, Physics I, or Integrated Chemistry/Physics<br>2 credits: any Core 40 science course |
| **Social Studies** | **6 Credits** |
| | 2 credits: U.S. History<br>1 credit: U.S. Government<br>1 credit: Economics<br>2 credits: World History/Civilization or Geography/History of the World |
| **World Languages** | **6 – 8 Credits** |
| | Latin, Spanish, Japanese<br>Six (6) credits in a single world language or four (4) credits in each of two (2) different world languages |
| **Fine Arts** | **2 Credits** |
| | Music, Theatre, Visual Arts |
| **Physical Education** | **2 Credits** |
| **Health & Wellness** | **1 Credit** |
| **Electives** | **7 - 9 Credits** |
| | Core 40 courses/credits which will enhance or support the academic career sequence of the student's graduation plan |
| **Grade Requirements** | - Earn a grade of a "C" or better in courses that will count toward the diploma<br>- Have a grade point average of a "B" or better |
| **Other Requirements** | Complete **one** of the following:<br>A.  Earn 4 credits in 2 or more AP courses and take corresponding AP exams<br>B.  Earn 6 verifiable transcripted college credits in dual credit courses from priority course list<br>C.  Earn a minimum of 3 verifiable transcripted college credits from the priority course list and 2 credits in AP courses and corresponding AP exams<br>D.  Earn a combined score of 1250 or higher w/a minimum score of 560 on math and 590 on the evidence based reading and writing<br>E.  Earn an ACT composite score of 26 or higher and complete written section |
| **TOTAL** | **47 Credits required for Core 40 with Academic Honors** |

# Core 40 with Technical Honors Credit Outline – 47 Credits

| | |
|---|---|
| **English/Language Arts** | **8 Credits** |
| | English 9–12 fulfill this requirement<br>Other English courses may fulfill this requirement. |
| **Mathematics** | **6 Credits (in grades 9-12)** |
| | Algebra I, Algebra II, Geometry, Pre-Calculus/Trigonometry, Calculus, Probability & Statistics, Finite Math |
| **Quantitative Reasoning** | For the Core 40 with Technical Honors diploma, students must take a mathematics course or alternate quantitative reasoning course each year they are enrolled in high school. |
| **Science** | **6 Credits** |
| | 2 credits: Biology I<br>2 credits: Chemistry I, Physics I, or Integrated Chemistry/Physics<br>2 credits: any Core 40 science course |
| **Social Studies** | **6 Credits** |
| | 2 credits: U.S. History<br>1 credit: U.S. Government<br>1 credit: Economics<br>2 credits: World History/Civilization or Geography/History of the World |
| **Career-Technical Pathways** | **6 or more Credits** |
| | Earn 6 credits in the college and career preparation courses in a state-approved College & Career Pathway and ***one*** of the following:<br>1. Pathway-designated industry-based certification or credential, or<br>2. Pathway dual credits from the approved dual credit list resulting in six (6) transcripted college credits |
| **Physical Education** | **2 Credits** |
| **Health & Wellness** | **1 Credit** |
| **Electives** | **6 or more Credits** |
| | Core 40 courses/credits which will enhance or support the academic career sequence of the student's graduation plan. |
| **Grade Requirements** | - Earn a grade of a "C" or better in courses that will count toward the diploma<br>- Have a grade point average of a "B" or better |
| **Other Requirements** | Complete **one** of the following:<br>A. Any one of the options (A-E) of the Core 40 with Academic Honors<br>B. Earn the following scores or higher on WorkKeys: Reading for Information Level 6; Applied Mathematics – Level 6; Locating Information – Level 5<br>C. Earn the following minimum score(s) on Accuplacer: Writing 80, Reading 90, and Math 75<br>D. Earn the following minimum score(s) on Compass; Algebra 66, Writing 70, Reading 80 |
| **TOTAL** | **47 Credits required for Core 40 with Technical Honors** |

# General Diploma Credit Outline (*Minimum 40 Credits*)

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.

| | |
|---|---|
| **English/Language Arts** | **8 Credits** |
| | English 9–12 fulfill this requirement<br>Other English courses may fulfill this requirement. |
| **Mathematics** | **4 Credits** |
| | 2 credits: Algebra I or Integrated<br>2 credits: any math course |
| **Quantitative Reasoning** | For the General Diploma, students must earn two credits in a mathematics course or a quantitative reasoning course during their junior or senior year. |
| **Science** | **4 Credits** |
| | 2 credits: Biology I<br>2 credits: any science course (at least one must be from a Physical or<br>Earth and Space Science course) |
| **Social Studies** | **4 Credits** |
| | 2 credits: U.S. History<br>1 credit: U.S. Government<br>1 credit: any social studies course |
| **Physical Education** | **2 Credits** |
| **Health & 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** |
| | To earn 5 Flex Credits a student must complete one of the following:<br>    Additional courses to extend the CTE Pathway<br>    Courses involving workplace learning, such as Work-Based<br>    Learning High School/college dual credit courses<br>    Additional courses in English, Math, Science, Social Studies, or other |
| **Electives** | **6 Credits** |
| **TOTAL** | **40 Credits – Minimum Required for an MCS Diploma** |

# Indiana Certification of Completion
## Course of Study

The Course of Study for the Certification of Completion is a framework for aligning curriculum to grade level standards while meeting the individual goals and transition needs stated in the student's Individual Education Plan (IEP).

| | |
|---|---|
| **Minimum total 40 credits/applied units: It is expected that these requirements are met through enrollment in a combination of general education course for credit, modified general education course in which non-credit applied units are earned and special education courses in which non-credit applied units are earned.** | |
| **English/ Language Arts** | **8 credits/applied units** |
| | Including a balance of literature, composition, vocabulary, speech/communication |
| **Mathematics** | **4 credits/applied units** |
| | Including a balance of number sense, expressions, computation, data analysis, statistics, probability, equations and inequalities and personal finance. Student must take a math or applied math course each year in high school. |
| **Science** | **4 credits/applied units** |
| | Including a balance of physical, earth/nature, life, engineering and technology |
| **Social Studies** | **4 credits/applied units** |
| | Including a balance of history, civics and government, geography, economics |
| **Physical Education** | **2 credits/applied units** |
| **Health & Wellness** | **1 credit/applied unit** |
| **Employability** | **10 credits/applied units** |
| | Job exploration, work-or-project-based learning experiences, employability skills (mindsets, self-management, learning strategies, social, workplace), portfolio creation, introduction to post-secondary options |
| | Investigation into opportunities for enrollment in postsecondary programs, work place readiness training to develop employability and independent living skills and instruction in self-advocacy. |
| **Electives** | **7 credits/applied units** |

| Certificate of Completion Transition Portfolio |
|---|

**Students earning a certificate of completion fulfill <u>at least one</u> of the following (aligned with transition goals):**
1. **Career Credential:** Complete an industry-recognized certification, one-year certificate or state-approved alternative.
2. **Career Experience:** Complete project-or-work-based learning experience or part-time employment.
3. **Work Ethic Certificate:** Earn a Work Ethic Certificate (criteria to be locally determined).
4. **Other Work Related Activities:** As determined by the case conference committee.

**Assumptions:**
1) *High expectations for all students is a shared responsibility*
2) *General Education courses are accessed whenever appropriate to fulfill the Certificate of Completion course of study.*
3) *Students' IEP goals are aligned with grade-level standards/content connectors that drive curriculum and instruction.*
4) *Communication skills, reading skills, and problem-solving skills are integrated into all courses.*
5) *Courses can be repeated with new goals if appropriate; more than four years may be needed for completion.*
6) *All courses are driven by the Transition IEP and individual goals of each student.*

# Opt-Out Process from Indiana's Core 40 Graduation Requirements

The Indiana General Assembly made completion of Core 40 a graduation requirement for all students. The legislation includes an opt-out provision for parents who determine that their student could benefit more from the General Diploma. To graduate with less than Core 40, the following formal opt-out process must be completed:
(*Indiana Code § 20-32-4-7, 8, 9, and 10*)

1. The student, the student's parent or guardian, and the student's counselor (or another staff member who assists students in course selection) meet to discuss the student's progress.
2. The student's career and course plan is reviewed.
3. The student's parent or guardian determines if the student will achieve greater educational benefits by completing the general curriculum or the Core 40 curriculum.
4. 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 that the student will pursue is determined.

If the parent does not attend the opt-out meeting with the student and the student's counselor after receiving two (2) written requests to attend, the student and the student's counselor shall meet. The student's counselor shall make a recommendation to the student as to whether the student will achieve greater educational benefits by continuing in the Core 40 curriculum or completing the general curriculum, and the student shall determine which curriculum the student will complete.

Students opting out of Core 40 after their 11th grade year must complete all requirements for the General Diploma with the career-academic sequence requirement waived. This waiver allows students who switch to the General Diploma curriculum at the end of their 11th grade year to graduate with their class. This waiver allows out-of-state students who transfer to Indiana following the 11th grade year to graduate with their class.

## Core 40 Opt-Out Conditions
The following conditions may trigger a discussion about opting-out of the Core 40 Diploma requirements:

- A parent may request that a student be exempted from the Core 40 curriculum and be required to complete the General Diploma to graduate, or
- The student does not pass at least three (3) courses required under the Core 40 curriculum, or
- The student receives a score on the ISTEP (GQE) that is in the twenty-fifth percentile or lower when the student takes the assessment for the first time.

# GRADUATION PATHWAY POST-SECONDARY WAIVER REQUIREMENTS – Class of 2026 through 2028

Students in the 2026 graduating class and beyond may qualify for a waiver from meeting the Postsecondary Readiness Competency under the following conditions:

A) The student was unsuccessful in completing a postsecondary readiness competency requirement by the conclusion of the student's senior year, including a student who was in the process of completing a competency at one school that was not offered by the school to which the student transferred; and the student attempted to achieve at least three separate postsecondary readiness competencies; or

B) if a student transfers to a school during the senior year from a non-accredited, non-public school or an out-of-state school and the student attempted to achieve at least one postsecondary readiness competency requirement; and was unsuccessful in completing the attempted postsecondary readiness competency.

To receive a Post-Secondary Readiness Waiver, the student must:
1. Maintain at least a 'C' average, or its equivalent, throughout the student's high school career in courses comprising credits required for the student to graduate;
2. Maintain a school attendance rate of at least 95% with excused absences not counting against the student's attendance;
3. Satisfy all other state and local graduation requirements beyond the postsecondary readiness competency requirements; and
4. Demonstrate postsecondary planning, including:
   a. College acceptance;
   b. Acceptance in an occupational training program;
   c. Workforce entry; or
   **d.** Military enlistment; that is approved by the principal of the student's school.

# Classes to Careers

High school is that time to prepare for your future career. The classes you take during your high school years should prepare you for what comes after graduation. Deciding what to do after high school can be challenging as you may not know enough about your career options. There are some things you can do to get a career focus area.

### *Steps for finding a career area of interest to you:*
1. Think about people you've read about or met who have interesting jobs. Talk with family members, friends or teachers who can connect you with people who work in certain occupations.
2. Take a Career Interest Inventory online.
3. Conduct your own online career research to learn about career opportunities all over the globe and those available right here in Muncie.
4. Create your own Career Profile.
5. Participate in a job shadow, internship, work experience, after-school activities, or volunteer in your area of interest to learn more.

Once you have a career focus, then selecting the right high school classes becomes an easier process. This, in turn, ensures you will be ready for what comes next after high school referred to as your postsecondary education plans. A fancy way of saying that you are thinking about employment, two-year or four-year college plans, a technical certification, an apprenticeship, military training, or other options.

Websites that can provide you career direction and postsecondary choices:

- Indiana Career Explorer: https://indianacareerexplorer.com/
- Big Future College Board: https://bigfuture.collegeboard.org (Click on Explore Careers & Majors)
- Occupational Outlook Handbook: https://www.bls.gov/ooh/ (Click on Students top menu bar
- O*Net Online: www.onetonline.org
- INDemand Jobs – Indiana: https://indemandjobs.dwd.in.gov/

The graph on the next page is intended to help you organize career fields in a manner that assists you with identifying a broad understanding of careers. This will help when selecting high school courses and programs that provide you with opportunities to explore and prepare for your future.

**Career Exploration: It is easier to choose from career options when they are organized in some way.**

Career Fields: First, look at occupations as divided into six very large groups. Think about your interest and skills across the six broad career fields at the top of the chart. Where do you fit?

Career Clusters: After selecting a career field, then look at the individual career clusters or groups under each career field heading. Each cluster is made up of a number of occupations and post-secondary majors related to the specialty of that career cluster. Within each career cluster, there are numerous career titles and job descriptions that align with the career cluster. These specific career areas are referred to as a career pathway. It is important that you research career pathway options within a career cluster so you get an idea of the type of work, educational requirements, salary, and other important aspects of the career area of interest to you!

# Career Fields & Career Clusters

## 6 Career Fields

| Industrial, Manufacturing, and Engineering Systems | Business, Marketing, and Management | Human Services and Resources | Communication and Information Systems | Health Sciences | Environmental and Agricultural Systems |
|---|---|---|---|---|---|
| Manufacturing | Marketing | Human Services | Arts, A/V Technology, & Communications | Health Science | Agriculture, Food, & Natural Resources |
| Transportation, Distribution, & Logistics | Finance | Law, Public Safety, Corrections, & Security | Information Technology | | |
| Science, Technology, Engineering, & Math | Business Management & Administration | Government & Public Administration | | | |
| Architecture and Construction | Hospitality & Tourism | Education & Training | | | |

*Source: Indiana Career Explorer*

# Industrial, Manufacturing, and Engineering Systems

**Make High School Count as you look at a career in this STEM Field:**
- Take an engineering, automation/robotics, welding, or auto technology class to gain hands-on experience with machines and tools.
- Take English, as well as advanced math and science (Physics). You'll have to explain your ideas in reports and presentations.
- Study computer science, a field with very close ties to electrical engineering.
- Sign up for computer-aided drafting and design.
- Get a summer job or internship in an advanced manufacturing company
- Study a foreign language. That way, you'll be ready to cope in an increasingly global manufacturing industry.

| Career Opportunities | MCHS Courses beyond the Core: English, Math, Science, and Social Studies | MCHS CTE Pathway Options for Meeting Graduation Requirements |
|---|---|---|
| Automation Engineer<br>Design Engineer<br>Electrical Engineer<br>Industrial Engineer<br>Manufacturing Engineer<br>Production Manager<br>Process Engineer<br>Quality Control/Assurance<br>Robotics Engineer<br>Sales Engineer | Pre-Calculus/Trigonometry<br>AP Calculus AB or BC<br>AP Statistics<br>Intro to Computer Science<br>AP Computer Science<br>AP Physics I & II<br>Introduction to Engineering and Design (IED)<br>World Language<br><br>*Post High School: 4-years of college* | ***Purdue Engineering Technology - STEM Computers in Manufacturing***<br>1. CTE Concentrator Status: Advanced CTE College Credit I & II STEM<br>2. CTE Dual Credits: Purdue University College Credits - Must complete 3 classes at C average or higher<br>3. Embedded immersive learning meets the Employability Skills requirement |
| Automation Robotics Technician<br>Electro-Mechanical Technician<br>Maintenance Technician<br>Manufacturing Engineer Technician<br>Lead Operator<br>Lead Supervisor | Algebra II<br>Integrated Chemistry-Physics<br>Physics<br>Intro to Computer Science<br>Computers in Design and Production<br><br>*Post High School: Direct employment, employer apprenticeship, 2 years college, or technical certification* | ***Automation Technology Careers - STEM***<br>1. CTE Concentrator Status: ***Principles of Advanced Mfg., Advanced Mfg. Technology, Mechatronics Systems***<br>2. Industry Certification: FANUC Certified Robot Operator-1<br>3. CTE Dual Credits: Must complete 3 classes at C average or higher<br>4. Embedded immersive learning meets the Employability Skills requirement |
| Pipefitter<br>Robotic Welding Technician<br>Technical Sales<br>Underwater Welder<br>Welder Fabricator<br>Welding Inspector<br>Welding Technician<br>Supervisor | Algebra II<br>Integrated Chemistry-Physics<br>Physics<br>Intro to Computer Science<br>Computers in Design and Production<br>Intro to Design Processes<br><br>*Post High School: Direct employment, employer apprenticeship, 2 years college, or technical certification* | 1. CTE Concentrator Status: ***Principles of Welding, Technology, Shielded Metal Arc Welding, Gas Welding Processes***<br>2. Industry Certification: American Welding Society (SENSE AWS)<br>3. CTE Dual Credits: Must complete 3 classes at C average or higher<br>4. Embedded senior internship meets Employability Skills requirement |

# Architecture & Construction

**Make High School Count as you look at a career in the Architecture and Construction field:**

- Get a good foundation in math. Take algebra and geometry, which will help you take precise measurements and make accurate calculations in your work later.
- Consider taking classes in art or interior design to build your creativity skills.
- Pay attention in English. Good communication skills will help you read blueprints, safety warnings, and complex instructions and give clear directions to others.
- Study physics, so you can begin your training with a solid knowledge of physical construction and how electricity works.
- Attend a summer architecture program or consider interning for a construction firm.

| Career Opportunities | MCHS Courses beyond the Core: English, Math, Science, and Social Studies | MCHS CTE Pathway Options for Meeting Graduation Requirements |
|---|---|---|
| Civil Engineer<br>Commercial or Public Architect<br>Construction Manager<br>Electrical Engineer<br>Interior Designer<br>Landscape Architect<br>Residential Design Architect<br>Restoration Architect<br>Urban & Regional Planner | Pre-Calculus/Trigonometry<br>AP Physics I & II<br>Interior Design<br>2D or 3D Art classes<br>Speech or Debate<br>Intro to Engineering & Design<br>Principles of Engineering<br><br>*Post High School:  4-years of college* | 1.CTE Concentrator Status:<br>   ***Project Lead The Way Civil Engineering & Architecture classes:***<br>  ● Intro to Engineering & Design<br>  ● Principles of Engineering PLTW<br>  ● Civil Engineering & Architecture<br>  ● Engineering Design & Development<br>2. CTE Dual Credits: Must complete 3 classes at a C average or higher<br>3. STEM Project meets Employability Skills requirement |
| Building & Property Maintenance<br>Bricklayers or Stonemason<br>Carpenter<br>Concrete Finisher<br>Construction Site Supervisor<br>Construction Equipment Operator<br>Painter<br>Plumber<br>Roofer | Geometry & Algebra II<br>Physics I & II<br>Construction Systems<br>Intro to Computer Science<br>Computers in Design and Production<br>Into to Design Processes<br><br>*Post High School:  Direct employment, employer apprenticeship, 2 years college, or technical certification* | 1. CTE Concentrator Status:<br>***Principles of Construction Trades, General Carpentry, Framing and Finishing***<br>2. Industry Certification:  National Center for Construction Education and Research (NCCER)<br>3. CTE Dual Credits:  Must complete 3 classes at C average or higher<br>4. Embedded internship meets Employability Skills requirement |
| Aircraft Equipment Mechanic<br>Commercial Electrician<br>Electrical Drafter<br>Electrical Supervisor<br>Elevator Technician<br>HVAC Technician<br>Industrial-Electrical Technician<br>Residential Electrician | Geometry & Algebra II<br>Physics I & II<br>Construction Systems<br>Computers in Design and Production<br>Intro to Design Processes<br><br>*Post High School:  Direct employment, employer apprenticeship, 2 years college, or technical certification* | 1. CTE Concentrator Status:<br>2. ***Principles of Construction Trades, Electrical Fundamentals, Advanced Electrical***<br>3. Industry Certification:  National Center for Construction Education and Research (NCCER)-Electrical<br>4. CTE Dual Credits:  Must complete 3 classes at C average or higher<br>5. Embedded internship meets Employability Skills requirement |

# Transportation, Distribution, & Logistics

**Make High School Count as you look at a career in Transportation & Logistics:**
- Master electronics and computers. You need to be familiar with computer programs and automated instruments.
- Sign up for an automotive technology class. Get a sense for how engines and vehicles work.
- Build solid reading and writing skills. You will be using them to read regulations, service manuals, and write detailed reports.
- Pay attention in chemistry, math, and physics as that knowledge will be useful.

| Career Opportunities | High School Courses beyond the Core: English, Math, Science, and Social Studies | High School CTE Pathway Options for Meeting Graduation Requirements |
|---|---|---|
| Air Traffic Controller<br>Aircraft Technician<br>Flight Attendant<br>Pilot<br>Railroad Engineer | AP English Composition<br>Pre-Calculus/Trigonometry<br>AP Statistics<br>AP Computer Science<br>AP Physics I & II<br>Introduction to Engineering and Design (IED)<br>World Language<br><br>*Post High School: 4-years of college plus specialized training* | |
| Automotive Technician<br>Automotive Body Tech<br>Commercial Vehicle Driver CDL<br>Dealership Manager<br>Diesel/Heavy Truck Mechanic<br>Farm Equipment Mechanic<br>Heavy Equipment Technician<br>Service Technician | Algebra II<br>Computer Science<br>English Composition<br>Physics<br>Digital Applications<br>Transportation Systems<br><br>*Post High School: Direct employment, 2 years college, or technical certification* | 1. CTE Concentrator Status:<br>***Principles of Automotive Service, Brake Systems, Steering and Suspension***<br>Industry Certification: Automotive Service Excellence (ASE)<br>2. CTE Dual Credits: Must complete 3 classes at C average or higher<br>3. Embedded internship meets Employability Skills requirement |
| Distribution Manager<br>Logistics Coordinator<br>Materials Manager<br>Routing/Scheduling Clerk<br>Transportation Planner<br>Warehouse Manager | Algebra II<br>English Composition<br>Physics<br>Interpersonal Relationships<br>Principles of Business Mgmt.<br>Digital Applications<br>Computer Science<br>Transportation Systems<br><br>*Post High School: Direct employment, 2 years college, or technical certification* | |

# Business, Marketing, & Management

**<u>Make High School Count as you look at a career in the Business Field:</u>**
- Sign up for classes in business, accounting, and computers.
- Try a psychology class to gain insight into the complexities of human nature - and why some products are hot while others are not.
- Do your best in math and consider taking a statistics class. You will certainly be working with numbers in business management, accounting, marketing or sales.
- Intern with or work for a local business, learning how to answer phones, write business letters, and conduct yourself in a professional manner.

| *Career Opportunities* | *High School Courses beyond the Core: English, Math, Science, and Social Studies* | *High School CTE Pathway Options for Meeting Graduation Requirements* |
|---|---|---|
| ***Accounting & Finance Careers:*** <br> Actuarial Analyst <br> Accountant – All Areas <br> Auditor <br> Certified Financial Planner <br> Financial Controller <br> Financial Analyst <br> Financial Manager <br> Investment & Securities Broker <br> Loan Officer <br> Tax Consultant | AP English Composition <br> Probability & Statistics <br> Advanced Accounting <br> AP Micro & Macro Economics <br> Digital Applications <br> AP Computer Science – coding <br> Business Law & Ethics <br> Principles of Marketing <br> Principles of Management <br><br> *Post High School:  2-years to 4-years of college* | |
| ***Business Administration & Management Careers:*** <br> Accounting Clerk <br> Administrative Assistant <br> Data Entry Specialist <br> Executive Assistant <br> Human Resource Manager <br> Office Administrator <br> Office Manager <br> Secretary | English Composition <br> Advanced Accounting <br> Business Law & Ethics <br> Digital Applications <br> Intro to Computer Science <br> Principles of Management <br> Principles of Marketing <br> Interpersonal Relationships <br><br> *Post High School:  Direct employment, 2 years, 4-years college, or technical certification* | 1. CTE Concentrator Status: <br> ***Principles of Business Management, Management Fundamentals, Accounting Fundamentals*** <br> 2. CTE Dual Credits:  Must complete 3 classes at C average or higher <br> 3. Embedded internship meets Employability Skills requirement |
| ***Marketing, and Sales Career Focus:*** <br> Advertising & Public Relations <br> Digital Marketing Specialist <br> Insurance Agent <br> Marketing Manager/Director <br> Marketing Research Analyst <br> Property/Real Estate Agent <br> Sales Manager/Director <br> Sales Representative – All <br> Wholesale and Manufacturing Sales Representative | Probability & Statistics <br> Digital Applications <br> Advanced Accounting <br> AP Micro Economics <br> AP Macro Economics <br> Principles of Marketing <br> Strategic Marketing <br> Interpersonal Relationships <br> Psychology <br><br> *Post High School: 2-years or 4-years of college* | |

# Hospitality Careers

**<u>Make High School Count as you look at a career in the Hospitality field:</u>**

- Sign up for cooking and nutrition classes - the sooner you learn the basics, the better.
- Pay attention in chemistry classes where you will learn about the makeup of different foods and the link between chemistry and nutrition.
- Take business classes. Some chefs take on managerial tasks, such as budgeting and staffing, and you might end up with your own restaurant someday.
- Get an after-school job at a restaurant and find out if the fast pace of the kitchen is for you.

| Career Opportunities | High School Courses beyond the Core: English, Math, Science, and Social Studies | High School CTE Pathway Options for Meeting Graduation Requirements |
|---|---|---|
| Clinical Dietitian<br>Food Industry Representative: Sales, Marketing, or Public Relations<br>Food & Nutrition Manager: Hospitals, long-term health Care facilities, schools<br>Food Service Equipment Sales<br>Food Service Contract Manager<br>Food Service Vendor | Probability & Statistics<br>Chemistry<br>Economics<br>Principles of Business Mgmt.<br>Principles of Marketing<br>Nutrition & Wellness I & II<br>Digital Applications<br>Sociology<br>Interpersonal Relationships<br><br>*Post High School: 2-years college, many 4-years of college* | 1. CTE Concentrator Status: ***Principles of Culinary and Hospitality, NLPS Nutrition, Nutrition Planning and Therapy***<br>*-or-*<br>***Principles of Culinary and Hospitality, NLPS Nutrition, Culinary Arts***<br>*-or-*<br>***Principles of Culinary and Hospitality, NLPS Nutrition, Hospitality Management***<br>2. Embedded Internship meets Employability Skills requirement |
| **Food Services Career Titles**<br>Baker<br>Food Services Manager<br>Head/Executive Chef<br>Line Cook<br>Kitchen Assistant<br>Purchasing Manager<br>Restaurant Manager<br>Restaurant Staff | Chemistry<br>Economics<br>Nutrition & Wellness I & II<br>Nutrition Science Careers I & II<br>Principles of Business Mgmt.<br>Principles of Marketing<br>Accounting<br>Digital Applications<br><br>*Post High School: Direct employment, 2 years college, or technical certification* | |

# Human Services

**<u>Make High School Count as you look at a career in Human or Personal Services.</u>**
- Take psychology to learn about human development, emotion, and communication.
- Interview a social worker, case manager, or person in your specific area of interest.
- Sign up to be a peer tutor, after-school volunteer at a community center, other social services agency or join a service club at your school, like Key Club.
- Visit the website of the American School Counselor Association.
- Build excellent reading, writing and speaking skills.

| Career Opportunities | High School Courses beyond the Core: English, Math, Science, and Social Studies | High School CTE Pathway Options for Meeting Graduation Requirements |
|---|---|---|
| Child Advocate<br>Child & Family Social Worker<br>Crisis Intervention Counselor<br>Domestic Violence Case Manager<br>Human Services Manager<br>Interpreter<br>Marriage & Family Therapist<br>Mental Health Counselor<br>Occupational Therapist<br>Public Health Social worker<br>Public Administration<br>Rehabilitation Counselor<br>School Counselor<br>School Psychologist<br>Social Worker (various areas)<br>Substance Abuse Counselor<br>Youth Service Coordinator | Algebra II and Math Statistics<br>English Composition<br>Anatomy/Physiology<br>Medical Terminology<br>Digital Applications<br>Child Development<br>Adult Roles & Responsibilities<br>Nutrition & Wellness<br>Interpersonal Relationships<br>Psychology<br>Sociology<br>World Language<br><br>*Post High School:*<br>*2 years college, but many require 4 years of college plus a Master's Degree or additional training or certification* | 1. CTE Concentrator Status:<br>    ***Principles of Human Services, Understanding Diversity, Relationships and Emotions***<br>2. Embedded Internship meets Employability Skills requirement |
| ***Personal Services Careers:***<br>Advertising Stylist<br>Beauty Business Consultant<br>Esthetician<br>Hair Stylist<br>Makeup Artist<br>Nail Technician<br>Salon Owner | Anatomy or Advanced Biology<br>Chemistry<br>English Comp<br>Public Speaking-Speech<br>Theatre<br>Art<br>Principles of Business<br>Principles of Marketing<br>Accounting<br><br>*Post High School:*<br>*Certification, Direct Employment, or 2-years college* | 1. CTE Concentrator Status:<br>***Principles of Barbering and Cosmetology, Barbering and Cosmetology Fundamentals, Advanced Cosmetology***<br>2. Industry Certification: State Board of Cosmetology Examination<br>3. CTE Dual Credits: Must complete 3 classes at C average or higher<br>4. Embedded internship meets Employability Skills requirement |

# Law, Public Safety, Corrections, & Security

**Make High School Count as you look at a career in Law or Public Safety:**
- Build excellent reading, writing, and speaking skills.
- Sign up for a psychology class. Public Safety jobs work directly with people and you will want to know what makes people tick.
- Pay attention in math and science classes. They will help you sharpen your ability to think things through and solve problems on the job.
- Put extra effort into gym classes and get involved in extracurricular activities. Strength and stamina are required for many of these jobs.
- Learning a second language will also give you a job-hunting edge in some cities.

| Career Opportunities | High School Courses beyond the Core: English, Math, Science, and Social Studies | High School CTE Pathway Options for Meeting Graduation Requirements |
|---|---|---|
| Court Reporter<br>Corporate Lawyer<br>Criminal Lawyer<br>Family Lawyer<br>Government Lawyer<br>Judges<br>Paralegal/Legal Assistant<br>Private-Practice Lawyer | AP English Composition<br>AP US History<br>AP Government<br>AP Economics<br>Intro to Computer Science<br>Public Speaking – Speech<br>AP Psychology<br><br>*Post High School: 4-year college followed by law school. Paralegal minimum Associates Degree* | |
| *Air Marshal<br>*Computer Forensic Investigator<br>Conservation Officer<br>Corrections Officer<br>Detective<br>Dispatcher<br>*Homeland Security Agent<br>*Federal Agent<br>*Forensic Scientist<br>Military Personnel<br>Police Officer or Sheriff's Deputy<br>Security Guard<br>State Trooper | Algebra II<br>JROTC<br>Physical Conditioning & PE II<br>Chemistry<br>US History & Government<br>Psychology<br>Sociology<br>English Composition<br>Digital Application<br>World Language<br>Interpersonal Relationships<br><br>*Post High School: Direct employment, 2 years college, or technical certification.* | 1. CTE Concentrator Status: ***Principles of Criminal Justice, Law Enforcement and Cultural Awareness, Courts and Corrections***<br>2*.* CTE Dual Credits: Must complete 3 classes at C average or higher |
| 911 Call Center Specialist<br>Fire Fighter<br>Fire Investigator<br>Emergency Medical Technician<br>*Emergency Management Director | *A few will require 4-year college or more training.* | 1. CTE Concentrator Status: ***Principles of Fire Fighting, Fire Fighting Fundamentals, Advanced Fire Fighting***<br>2. Industry Certification: Fire Fighter I or Emergency Medical Responder |

# Education & Training

## Make High School Count as you look at a career in Education:

- Get a well-rounded education, especially if you want to teach in an elementary school, where academic teachers cover all subjects, from english to math.
- Consider what subject area you like best in high school and focus your class selections in this area so you can learn as much of the content as possible to be a teacher of math, english, world language, science, business, physical education or another subject area.
- Join a peer-tutoring program, volunteer in a childcare center, work at a summer camp, or enroll in a program that offers an internship experience working in an elementary, middle school, or preschool center.

| Career Opportunities | MCHS Courses beyond the Core: English, Math, Science, and Social Studies | MCHS CTE Pathway Options for Meeting Graduation Requirements |
|---|---|---|
| Curators<br>Elementary Teacher<br>Exhibit Designers<br>Instructional Coordinator<br>Librarians<br>Middle or High School Teacher<br>Postsecondary Instructor<br>Principal<br>School Administrator<br>School Counselor<br>Special Education Teacher | AP English Composition<br>Child Development<br>AP Computer Science<br>Digital Applications<br>Interpersonal Relationships<br>AP Psychology<br>Public Speaking - Speech<br>MS or HS Teaching: Advanced or AP classes in subject area you want to teach<br><br>*Post High School: 4-years of college to enter a profession may need a Master's Degree or PH.D. for certain positions.* | 1. CTE Concentrator Status:<br>***Principles of Teaching, NLPS Child and Adolescent Development, Teaching and Learning***<br>2. CTE Dual Credits: Must complete 3 classes at C average or higher<br>3. Embedded Internship meets Employability Skills requirement |
| Child Care Assistant<br>Child Care Center Administrator<br>Preschool Teacher<br>Teacher Assistant | Child Development<br>Nutrition and Wellness<br>Adult Roles & Responsibilities<br>Interpersonal Relationships<br>Psychology<br>Digital Applications<br>Public Speaking - Speech<br><br>*Post High School: Preschool teacher – 4 years of college for other positions direct employment, 2 years college, or technical certification* | 1. CTE Concentrator Status:<br>***Principles of Early Childhood Education, Early Childhood Education Curriculum, Early Childhood Education Guidance***<br>2. Embedded internship meets Employability Skills requirement<br><br>Child Development Associate (CDA) Credential |
| Library Assistant<br>Museum Assistant<br>School Secretary<br>Substitute Teacher<br>Teachers Assistant | Digital Applications<br>Intro Computer Science<br>Child Development<br>Interpersonal Relationships<br><br>*Post High School: Direct employment, 2 years college, technical certification, or ParaPro Assessment* | |

# Communication & Information Systems Careers

**Make High School Count as you look at a career in the Technology field:**

- Information Technology Careers:
  - Take as many advanced math and computer science courses as you can.
  - Sign up for a summer computer camp or intern for an IT company.
  - Keep up with the latest news in computer technology.
- Arts, AV Technology, or Communications Careers:
  - Take music, drama, theatre, journalism and/or mass media classes.
  - Take AP English, journalism, speech, creative writing and learn how to analyze texts.
  - Attend a summer camp for band, acting and production or join a band.

| Career Opportunities | High School Courses beyond the Core: English, Math, Science, and Social Studies | High School CTE Pathway Options for Meeting Graduation Requirements |
|---|---|---|
| Cloud Engineer<br>Computer Network Architect<br>Computer Programmer<br>Software Developer<br>Computer Hardware Engineer<br>Computer Systems Analyst<br>Computer Support Specialist<br>Database Administrator<br>Information Security Specialist<br>IT Manager/Director<br>Mobile Designer<br>Network Administrator<br>Social Media Manager | Pre-Calculus/Trigonometry<br>AP Calculus AB or BC<br>Probability & Statistics<br>Physics I & II<br>Digital Applications<br>Principles of Business Mgmt.<br>Intro to Computer Science<br><br><br>*Post High School:  Two or four-year college, or technical certification* | 1. CTE Concentrator Status:<br>***Principles of Computing, Cybersecurity Fundamentals, Advanced Cybersecurity***<br>2. CTE Dual Credits:  Must complete 3 classes at C average or higher |
| Animator<br>Graphic Designer<br>Illustrator<br>Journalist<br>Multimedia Artist<br>Photographer<br>Web Designer | AP English Composition<br>Advanced Art classes<br>Drawing and Painting<br>Web Design<br>Computer Illustrations & Graphics<br>Intro Computer Science<br>Digital Applications<br><br>*Post High School:  Two or four-year college, or technical certification* | 1. CTE Concentrator Status:<br>***Principles of Visual Communication, Digital Design Graphics, Graphic Design and Layout***<br>2. CTE Dual Credits:  Must complete 3 classes at C average or higher |
| Actor<br>Art Director<br>Composer<br>Craft or Fine Artist<br>Dancer or Choreographer<br>Director: Art, Music, Theatre<br>Musician or Singer<br>Theater, Film, or TV Technician | AP English Comp. & Speech<br>Advanced Theatre classes<br>Advanced Choir<br>Advanced Concert Band<br>Advanced Art classes<br><br>*Post High School:  Direct employment, Two or four-year college, or technical certification* | |

# Health Science Careers

**<u>Make High School Count as you look at a career in the Health Career field:</u>**
- Enroll in math and science classes as well as psychology and sociology.
- Enhance your communication skills in English and speech classes.
- Study a foreign language so you'll be able to communicate with different patients.
- Volunteer to work in a health clinic, hospital or long-term care facility.

| *Career Opportunities* | *High School Courses beyond the Core: English, Math, Science, and Social Studies* | *High School CTE Pathway Options for Meeting Graduation Requirements* |
|---|---|---|
| Certified Nursing Assistant (CNA)<br>Certified Medical Assistant (QMA)<br>Home Health Aide (HHA)<br>Pharmacy Technician<br>Phlebotomist<br>Electrocardiogram Technician<br>Respiratory Therapist<br>Physical Therapist<br>Licensed Practical Nurse | Biology<br>Integrated Chemistry/Physics<br>Chemistry or Physics<br>Interpersonal Relationships<br>Nutrition and Wellness<br>Psychology<br><br>*Post High School:  Technical Certification or 2-year degree* | 1.  CTE Concentrator Status:<br>***Principles of Healthcare, Medical Terminology, Healthcare Specialist: CNA***<br>2.  Industry Certification:  Certified Nursing Assistant (CNA)<br>3.  CTE Dual Credits:  Must complete 3 courses at C average or higher<br>4.  Embedded clinical practicum meets Employability Skills requirement |
| Anesthesiologist<br>Clinical Laboratory Technician<br>Nurse Practitioner<br>Optometrist<br>Registered Nurse<br>Physician<br>Pediatrician<br>Pharmacist<br>Psychiatrist<br>Radiologist<br>Surgeon | Algebra II<br>AP Calculus<br>AP Biology<br>AP Chemistry & AP Physics<br>AP Psychology<br>Anatomy/Physiology<br>Medical Terminology<br><br>*Post High School:  4-years of college plus medical school for some titles* | 1.  CTE Concentrator Status:<br>***Principles of Biomedical Science, Human Body Systems, Medical Interventions:***<br>- Principles of Biomedical Science<br>- Human Body Systems<br>- Medical Interventions<br>- Biomedical Innovations<br>2.  STEM Project meets Employability Skills requirement |
| Dental Assistant<br>Dental Hygienist<br>Dentist - General<br>Dental Laboratory Technicians<br>Orthodontist<br>Periodontist | Algebra II<br>AP Calculus<br>AP Biology<br>AP Chemistry & AP Physics<br>AP Psychology<br>Anatomy/Physiology<br>Medical Terminology<br><br>***Post High School:  4-years of college plus dental school for some titles*** | 1.  CTE Concentrator Status:<br>***Principles of Dental Careers, Dental Career Fundamentals, Advanced Dental Careers***<br>2.  Industry Certification:  Dental X-Ray Certification (DANB)<br>3.  Dual Credits:  Must complete 3 classes at C average or higher<br>4.  Embedded internship meets Employability Skills requirement. |
| Health Information Technician<br>Medical Transcriptionist<br>Medical Records | Digi Apps & Responsibility<br>Intro. to Business<br>Intro. to Computer Science<br>Medical Terminology<br><br>***Post High School:  Technical Certification or 2-year degree*** | Participating in a Work-Based Learning course in a health care records job placement would meet Employability Skills requirements. |

# EARLY COLLEGE HIGH SCHOOL

Muncie Central is an Early College High School in partnership with Ivy Tech Community College

## What is Early College?

The Early College High School program conducted in partnership with Ivy Tech Community College is an accelerated program that allows MCHS students to earn a high school diploma while earning a college degree or credential.  Additionally, the Early College program provides students with extensive support in order to help students meet high school graduation requirements, become college and career ready, and succeed in college and beyond.  Early college provides an excellent opportunity for students to earn free college credits.

## What are the benefits?
- Earn an Associate's degree from Ivy Tech Community College
- Earn a one-year certificate (STGEC) from Ivy Tech
- Be college and career ready
- Save thousands of dollars on college tuition
- Graduate from a four-year college one to two years early

*Early College High School participation is associated with higher rates of college enrollment, credit accumulation, and degree attainment according the Indiana Commission for Higher Education, 2019 Early College Credit study.*

## What are the options?
Muncie Central students have the opportunity to earn:

1) ***An Associates' Degree (60 credit hours) – 2 Years College***
   - Associates of Liberal Arts Degree or Associates of Science Degree
   - Associates of General Studies Degree
     *(Transferable to a 4-year college or university)*

**OR**

2) ***A College Transfer Certificate (30 credit hours) – 1 Year of College***
   - Statewide Transfer General Education Core Certificate (STGEC)
     *(Widely accepted at four-year colleges for transfer)*

## What is the admissions process to Early College High School?
- Students complete the Early College application during their 8th grade year
- Admission criteria includes review of attendance, ILEARN scores, NWEA scores, and classroom work ethic and practices based on teacher recommendations.
- The Early College Admissions Committee reviews applications to determine initial candidate selections based on admission criteria.
- Students must take the Knowledge Assessment test at the end of their 8th grade year in order to be eligible to earn college credits in dual credit courses. Students not meeting qualifying scores will be given additional opportunities to meet dual credit requirements.

**KEY EARLY COLLEGE VOCABULARY:**

*ADVANCED PLACEMENT (AP)* - AP courses are college-level, subject-specific classes offered at MCHS. Enrolling in AP courses enables you to take national AP exams prior to the end of the school year for college or university placement. Receiving high scores on AP exams can enable you to earn college credits for specific college-level classes. College credits earned by passing AP examinations may be used for meeting Early College degree requirements.

*KNOWLEDGE ASSESSMENT –* a tool used to determine your entry into college courses. Early college students utilize KA as a means for qualifying for earning college credit through dual credit courses.

*DUAL CREDIT (DC)* - Dual credit courses are classes that allow a student to earn both high school credits and college credits at the same time.  Dual credit courses may be used to meet Early College degree requirements.  To earn an Associate's degree or meet the STGEC certificate requirements, a student must have earned 15 of the total college credits required through completion of dual credit classes, Ivy Tech online classes, or at the Ivy Tech campus.

**What are the requirements to graduate from the Muncie Central Early College High School?**
To graduate with an Ivy Tech Community College degree or certificate, the student must:
1. Earn a High School Diploma:  Core 40, Academic Honors, or Technical Honors
2. Attain a minimum grade point average of 2.00 in the required technical and general education courses
3. Successfully complete the required number of credits, with at least 15 of the total credits taken as a regular student of Ivy Tech, and not through test-out or other means of advanced placement
4. Satisfy all financial obligations due the College (Muncie Central Early College students are not charged tuition for any courses taught within the MCHS Early College program)
5. Satisfy program accreditation standards that may have additional requirements.
6. Each student entering the final semester prior to graduation must complete an Application for Graduation. This will be completed at the high school with the help of the Early College Coordinator.

**What could my class schedule look like each year of high school to earn an Associate of Arts in Liberal Arts Degree?**
The schedule below is only a SAMPLE:

## Freshman Year (Grade 9)

| | High School Course | Early College Course |
|---|---|---|
| 1 | English 9 | |
| 2 | Algebra I or Geometry | |
| 3 | Biology I | |
| 4 | Spanish I | |
| 5 | Preparing for College & Careers | IVYT 111 Ivy Tech Prep Seminar |
| 6 | 1st Sem: Computer Applications<br>2nd Sem: World History or Geography History of the World | CINS 101 Introduction to Microcomputers |
| 7 | Physical Education | |

## Sophomore Year (Grade 10)

| | High School Course | Early College Course |
|---|---|---|
| 1 | English 10 | |
| 2 | Algebra II or Geometry | |
| 3 | World History or Geography History of World | |
| 4 | Chemistry I | CHEM 101 Introductory Chemistry I |
| 5 | Spanish II | |
| 6 | Elective | |
| 7 | Physical Education II and Health | |

## Junior Year (Grade 11)

| | High School Course | Early College Course |
|---|---|---|
| 1 | EC English 11-1<br>EC English 11-2 OR<br>EC AP English Literature & Composition | ENGL 111 English Composition<br>ENGL 215 Rhetoric and Argument<br>AP Credit English Literature & Composition (W/AP Score) |
| 2 | Algebra II or Pre-Calculus/Trigonometry | MATH 136 College Algebra<br>MATH 137 Trig with Analytic Geometry |
| 3 | US History | HIST 101 Survey of American History I<br>HIST 102 Survey of American History II |
| 4 | Biology II | BIOL 101 Introductory Biology |
| 5 | Spanish III | SPAN 101 and SPAN 102 Spanish Level I & II |
| 6 | AP Psychology or classes in Humanistic and Artistic Ways of Knowing section | AP Psychology = PSYC 101 (W/AP score)<br>OR other college credits |
| 7 | Elective | |

## Senior Year (Grade 12)

| | High School Course | Early College Course |
|---|---|---|
| 1 | EC AP English Literature & Composition | ENGL 206 AP English Lit. & Composition (W/AP score) |
| 2 | Pre-Calculus/Trigonometry<br> OR<br>Calculus I | MATH 136 College Algebra or MATH 137 Trig with Analytic Geometry OR<br>MATH 211 Calculus I |
| 3 | US Government & Economics | POLS 101 Intro to American Government |
| 4 | Spanish IV | SPAN 201 and SPAN 202 Spanish Level III & IV |
| 5 | Quantitative Reasoning/Finite Math | MATH 123 Quantitative Reasoning<br>MATH 135 Finite Math |
| 6 | Speech & Liberal Arts Capstone | COMM 101 Fundamentals of Public Speaking<br>GENS 279 Liberal Arts Capstone Course |
| 7 | Elective | |

**Early College Notes:**
- The courses listed below are based upon the availability of Ivy Tech credentialed high school instructors. If credentialed high school instructors are not available, students may not be able to complete the Early College program.
- Options for PE will be available for students who are in band, choir, art, Project Lead The Way, MACC, or other programs.
- Students who test college ready in reading, writing, and math before the first day of registration will have an elective available.
- 

## IVY TECH ASSOCIATES OF ARTS IN LIBERAL ARTS (60 College Credits)

| Dual Credit Courses Offered at MCHS | MCHS Class Title | DC CR | Advanced Placement Courses Offered at MCHS | AP CR |
|---|---|---|---|---|
| *Ivy Tech Required Course – Freshmen Year = 1 Credit* | | | | |
| *IVYT 111 Student Success/Intro Ivy Tech | Preparing for College & Careers | 1 | | |
| *Speaking and Listening = 3 to 6 Credits* | | | | |
| *COMM 101 Fundamentals Public Speaking | Speech 1 Semester | 3 | | |
| *Written Communication = 3 Credits* | | | | |
| ENGL 111 English Composition | English 11-1 Lang/Comp | 3 | AP English Language Composition 1 & 2 (3, 4, 5) = ENGL 111 | 3 |
| *Quantitative Reasoning = 3 to 9 Credits* | | | | |
| MATH 136 College Algebra | Pre-Calculus/Trigonometry 1 | 3 | AP Statistics (Score 3, 4, 5) = MATH 200 | 3 |
| MATH 137 Trig with Analytic Geometry | Pre-Calculus/Trigonometry 2 | 3 | AP Calculus BC (Score 3, 4, 5) = MATH 212 | 4 |
| MATH 211 Calculus I | Calculus AB 1 and 2 | 4 | AP Calculus AB (Score 3, 4, 5) = MATH 211 | 3 |
| MATH 123 Quantitative Reasoning | Quantitative Reasoning | 3 | | |
| MATH 135 Finite Math | Finite Math 1 Semester | 3 | | |
| *Scientific Ways of Knowing = 3 to 9 Credits* | | | | |
| BIOL 101 Introductory Biology | Biology II-1 & II-2 | 3 | AP Biology (Score 3) = BIOL 101 or (Score 4 or higher) = BIOL 105 | 5 |
| CHEM 101 Introductory Chemistry I | Chemistry I-1 & I-2 | 3 | AP Physics (Score 3, 4, 5) = PHYS 101 | 4 |
| | | | AP Chemistry (Score 3, 4, 5) = CHEM 105 | 5 |
| *Social and Behavioral Ways of Knowing = 3 to 9 Credits* | | | | |
| HIST 101 Survey of American History I | US History I | 3 | AP US History 1 & 2 (Score 3, 4, 5) = HIST 101/102 | 6 |
| HIST 102 Survey of American History II | US History II | 3 | AP Psychology (Score 3, 4, 5) = PSYC 101 | 3 |
| POLS 101 Intro to American Government | US Government 1 Semester | 3 | AP US Government (3, 4, 5) = POLS 101 | 3 |
| | | | AP Microeconomics 1 & Macroeconomics 2 = ECON 201/202 | 6 |
| | | | AP World History (Score 3, 4, 5) = HIST 111/112 | 6 |
| *Professional Technical Requirements = 12 credits required* | | | | |
| *ENGL 215 Rhetoric and Argument | English 11-2 | 3 | | |
| *SPAN 101 Spanish Level I | Spanish III–1 | 4 | | |
| *SPAN 102 Spanish Level I | Spanish III–2 | 4 | | |
| *ENGL 206 Intro. To Literature | English 12-1 | 3 | AP English Literature & Composition 1 & 2 (Score 3, 4, 5) = ENG 206 | 3 |
| *Humanistic and Artistic Ways of Knowing = 3 to 9* | | | | |
| SPAN 201 Spanish Level III | Spanish IV-1 | 3 | AP Studio Art 2D 1 & 2 (Score 3, 4, 5) = ARTH 101 | 3 |
| SPAN 202 Spanish Level IV | Spanish IV-2 | 3 | | |
| *Transfer Cluster Electives = 16 credits* | | | | |
| CINS 101 Introduction to Microcomputers | Digital Applications 1 & 2 | 3 | AP Computer Science (Score 3, 4, 5) = CSCI 101 | 3 |
| HLHS 101 Medical Terminology | Medical Terminology | 3 | AP Environ. Biology (Score 3, 4, 5) = BIOL 120 | 3 |
| CRIM 101 Criminal Justice I (VU Credit) | MACC Criminal Justice I | 3 | | |
| *Liberal Arts Capstone Course – Senior year = 1 Credit* | | | | |
| *GENS 279 Liberal Arts Capstone Course | Taken Online | 1 | | |
| **TOTAL CREDITS MUST =** | | 60 | | |
| **\*Required Courses for Two-Year Degree** | | | **General Education Transfer Core minimum requirement = 30 credits** | |
| **15 Credits must come from IVY Tech DC** | | | | |

*Note: A student may earn an Associates in Science using the above course outline but instead of earning world language credits the student would take extra science, math, and humanities courses to meet credit requirements.*

# IVY TECH ASSOCIATES OF GENERAL STUDIES (60 College Credits)

| Dual Credit Courses Offered at MCHS | MCHS Class Title | DC CR | Advanced Placement Courses Offered at MCHS | AP CR |
|---|---|---|---|---|
| **Ivy Tech Required Course – Freshmen Year = 1 Credit** | | | | |
| *IVYT 111 Student Success/Intro Ivy Tech | Preparing for College & Careers | 1 | | |
| **Speaking and Listening = 3 – 6 Credits** | | | | |
| *COMM 101 Fundamentals Public Speaking | Speech 1 Semester | 3 | | |
| **Written Communication = 3 Credits** | | | | |
| ENGL 111 English Composition | English 11-1 Lang/Comp | 3 | AP English Language Composition 1 & 2 (Score 3, 4, 5) = ENGL 111 | 3 |
| **Quantitative Reasoning = 3 to 12 Credits** | | | | |
| MATH 136 College Algebra | Pre-Calculus/Trigonometry 1 | 3 | AP Statistics (Score 3, 4, 5) = MATH 200 | 3 |
| MATH 137 Trig with Analytic Geometry | Pre-Calculus/Trigonometry 2 | 3 | AP Calculus BC (Score 3, 4, 5) = MATH 212 | 4 |
| MATH 211 Calculus I | Calculus AB 1 and 2 | 4 | AP Calculus AB (Score 3, 4, 5) = MATH 211 | 3 |
| MATH 123 Quantitative Reasoning | Quantitative Reasoning | 3 | | |
| MATH 135 Finite Math | Finite Math  1 Semester | 3 | | |
| **Scientific Ways of Knowing = 3 to 12 Credits** | | | | |
| BIOL 101 Introductory Biology | Biology II-1 & II-2 | 3 | AP Biology (Score 3) = BIOL 101 or (Score 4 or higher) = BIOL 105 | 5 |
| CHEM 101 Introductory Chemistry I | Chemistry I-1 & I-2 | 3 | AP Physics (Score 3, 4, 5) = PHYS 101 | 4 |
| | | | AP Chemistry (Score 3, 4, 5) = CHEM 105 | 5 |
| **Social and Behavioral Ways of Knowing = 3 to 12 Credits** | | | | |
| HIST 101 Survey of American History I | US History I | 3 | AP US History 1 & 2 (Score 3, 4, 5) = HIST 101/102 | 6 |
| HIST 102 Survey of American History II | US History II | 3 | AP Psychology (Score 3, 4, 5) = PSYC 101 | 3 |
| | | | AP US Government (3, 4, 5) = POLS 101 | 3 |
| | | | AP World History (Score 3, 4, 5) = HIST 111/112 | 6 |
| | | | AP Microeconomics 1 & Macroeconomics 2 = ECON 201/202 | 6 |
| **Professional Technical Requirements = 6 Credits Required** | | | | |
| *ENGL 215 Rhetoric and Argument | English 11-2 | 3 | | |
| *POLS 101 Intro to American Government | US Government 1 Semester | 3 | | |
| **Humanistic and Artistic Ways of Knowing = 3 to 12** | | | | |
| ENG 206 Introduction to Literature | English 12-1 | 3 | AP English Literature & Composition 1 & 2 (Score 3, 4, 5) = ENG 206 | 3 |
| SPAN 101 Spanish Level I | Spanish III–1 | 4 | AP Studio Art 2D 1 & 2 (Score 3, 4, 5) = ARTH 101 | 3 |
| SPAN 102 Spanish Level I | Spanish III–2 | 4 | | |
| SPAN 201 Spanish Level III | Spanish IV-1 | 3 | | |
| SPAN 202 Spanish Level IV | Spanish IV-2 | 3 | | |
| **Transfer Cluster = 22 Required (15 Maximum from any one program prefix)** | | | | |
| | | | AP Computer Science (Score 3, 4, 5) = CSCI 101 | 3 |
| CINS 101 Introduction to Microcomputers | Digital Applications 1 & 2 | 3 | AP Environ. Biology (Score 3, 4, 5) = BIOL 120 | 3 |
| HLHS 101 Medical Terminology | Medical Terminology | 3 | | |
| CRIM 101 Criminal Justice I (VU Credit) | MACC Criminal Justice I | 3 | | |
| DESN 101, 104, 105 PLTW Courses | PLTW Engineering (3 CR each) | | | |
| Ivy Tech Dual Credits earned at MACC may be used to meet total AGS Credits: ADMF, AUTI, BIOT, BCTI, HLHS, DENT, INDT, WELD | | | | |
| **Liberal Arts Capstone Course = 1 Credit** | | | | |
| *GENS 279 Liberal Arts Capstone Course | Taken Online | 1 | | |
| **TOTAL CREDITS MUST =** | | **60** | | |
| *Mandatory Courses for Two-Year Degree | | | | |
| 15 Credits must come from IVY Tech DC | | | | |

## Transfer General Education Core Competencies Certificate (30 College Credits)

| Dual Credit Courses Offered at MCHS | MCHS Class Title | DC CR | Advanced Placement Courses Offered at MCHS | AP CR |
|---|---|---|---|---|
| **Speaking and Listening = 3 Credits** | | | | |
| COMM 101 Fundamentals Public Speaking | Speech 1 Semester | 3 | | |
| **Written Communication = 3 to 6 Credits** | | | | |
| ENGL 111 English Composition | English 11-1 Lang/Comp | 3 | AP English Language Composition 1 & 2 (Score 3, 4, 5) = ENGL 111 | 3 |
| ENGL 215 Rhetoric and Argument | English 11-2 | 3 | | |
| **Quantitative Reasoning = 3 to 12 Credits** | | | | |
| MATH 136 College Algebra | Pre-Calculus/Trigonometry 1 | 3 | AP Statistics (Score 3, 4, 5) = MATH 200 | 3 |
| MATH 137 Trig with Analytic Geometry | Pre-Calculus/Trigonometry 2 | 3 | AP Calculus BC (Score 3, 4, 5) = MATH 212 | 4 |
| MATH 211 Calculus I | Calculus AB 1 and 2 | 4 | AP Calculus AB (Score 3, 4, 5) = MATH 211 | 3 |
| MATH 123 Quantitative Reasoning | Quantitative Reasoning | 3 | | |
| MATH 135 Finite Math | Finite Math  1 Semester | 3 | | |
| **Scientific Ways of Knowing = 3 to 12 Credits** | | | | |
| BIOL 101 Introductory Biology | Biology II-1 & II-2 | 3 | AP Biology (Score 3) = BIOL 101 or (Score 4 or higher) = BIOL 105 | 5 |
| CHEM 101 Introductory Chemistry I | Chemistry I-1 & I-2 | 3 | AP Physics (Score 3, 4, 5) = PHYS 101 | 4 |
| | | | AP Chemistry (Score 3, 4, 5) = CHEM 105 | 5 |
| **Social and Behavioral Ways of Knowing = 3 to # Credits to equal 30** | | | | |
| HIST 101 Survey of American History I | US History I | 3 | AP US History 1 & 2 (Score 3, 4, 5) = HIST 101/102 | 6 |
| HIST 102 Survey of American History II | US History II | 3 | AP Psychology (Score 3, 4, 5) = PSYC 101 | 3 |
| | | | AP US Government (3, 4, 5) = POLS 101 | 3 |
| | | | AP World History (Score 3, 4, 5) = HIST 111/112 | 6 |
| | | | AP Microeconomics 1 & Macroeconomics 2 = ECON 201/202 | 6 |
| **Humanistic and Artistic Ways of Knowing =  3 to # credits to equal 30** | | | | |
| ENG 206 Intro. To Literature | English 12-1 | 3 | AP English Literature & Composition 1 & 2 (Score 3, 4, 5) = ENG 206 | 3 |
| SPAN 101 Spanish Level I | Spanish III–1 | 4 | AP Studio Art 2D 1 & 2 (Score 3, 4, 5) = ARTH 101 | 3 |
| SPAN 102 Spanish Level I | Spanish III–2 | 4 | | |
| SPAN 201 Spanish Level III | Spanish IV-1 | 3 | | |
| SPAN 202 Spanish Level IV | Spanish IV-2 | 3 | | |
| **TOTAL CREDITS MUST =** | | **30** | | |
| **15 Credits must come from IVY Tech DC** | | | | |

*Ivy Tech Community College's Statewide Transfer General Education Core (STGEC) is incorporated into all transfer curriculums unless program accreditation requirements dictate a different selection of courses. The STGEC Certificate consists of 30 college credit hours.  The completion of the STGEC credits at Ivy Tech Community College means it can transfer as a block and count as satisfying the Statewide Transfer General Education Core equivalent at the receiving public college or university in Indiana.*

*The STGEC was developed around the Association of American Colleges & Universities' LEAP (Liberal Education and America's Promise) Essential Learning Outcomes and supports all eight General Education Outcomes developed and approved by the Ivy Tech faculty. With few exceptions, the courses selected are from Indiana's Core Transfer Library.*

# Ivy Tech Community College Credit Awards for Advanced Placement Examinations
### Revised August 2015

| Advanced Placement Examination Title | Minimum Score | Ivy Tech Course | Credit Hours Awarded |
|---|---|---|---|
| Art History | 3 | ARTH 101 | 3 |
| | 4,5 | ARTH 101 and ARTH 102 | 6 |
| Biology | 3 | BIOL 101 | 3 |
| | 4 | BIOL 105 | 5 |
| | 5 | BIOL 105 and 107 | 10 |
| Calculus AB | 3, 4, 5 | MATH 211 | 4 |
| Calculus BC | 3 | MATH 211 | 4 |
| | 4,5 | MATH 211 and 212 | 8 |
| Chemistry | 3 | CHEM 101 | 5 |
| | 4,5 | CHEM 105 and 106 | 10 |
| Chinese Language and Culture | 3, 4, 5 | Foreign Language Elective | 8 |
| Comparative Government and Politics | 3, 4, 5 | POLS 211 | 3 |
| Computer Science A | 3, 4, 5 | CSCI 101 | 3 |
| English Language and Composition | 3 | ENGL 111 | 3 |
| | 4,5 | ENGL 111, 215 | 6 |
| English Literature and Composition | 3, 4, 5 | ENGL 206 | 3 |
| Environmental Science | 3, 4, 5 | BIOL 120 | 3 |
| European History | 3, 4, 5 | Humanities Elective | 3 |
| French Language | 3, 4, 5 | FREN 201, 202 | 8 |
| French Literature | 3 | Humanities Elective | 3 |
| German Language | 3, 4, 5 | Foreign Language Elective | 8 |
| Human Geography | 3, 4, 5 | Humanities Elective | 3 |
| Italian Language and Culture | 3, 4, 5 | Foreign Language Elective | 8 |
| Japanese Language and Culture | 3, 4, 5 | Foreign Language Elective | 8 |
| Latin/Literature | 3 | Humanities Elective | 3 |
| Latin/Vergil | 3, 4, 5 | Foreign Language Elective | 8 |
| Macroeconomics | 3, 4, 5 | ECON 201 | 3 |
| Microeconomics | 3, 4, 5 | ECON 202 | 3 |
| Music Theory | 3, 4, 5 | HUMA 117 | 3 |
| Physics B | 3 | PHYS 101 | 4 |
| | 4,5 | PHYS 101 ad 102 | 8 |
| Physics C/Electricity and Magnetism | 3 | PHYS 102 | 4 |
| | 4,5 | PHYS 221 | 4 |
| Physics C/Mechanics | 3 | PHYS 101 | 3 |
| | 4,5 | PHYS 220 | 4 |
| Psychology | 3, 4, 5 | PSYC 101 | 3 |
| Spanish Language | 3, 4, 5 | SPAN 201, 202 | 8 |
| Spanish Literature | 3 | SPAN 201, 202, 240 | 11 |
| Statistics | 3, 4, 5 | MATH 200 | 3 |
| Studio Art Drawing | 3, 4, 5 | ARTS 100 | 3 |
| Studio Art: 2-D Design | 3, 4, 5 | ARTS 102 | 3 |
| Studio Art: 3-D | 3, 4, 5 | ARTS 103 | 3 |
| U.S. Government and Politics | 3, 4, 5 | POLS 101 | 3 |
| United States History | 3, 4, 5 | HIST 101 and 102 | 6 |
| World History | 3, 4, 5 | HIST 111, 112 | 6 |

Students should request that results be sent to the specific Ivy Tech region they plan to attend.
Credit will be awarded only if the AP tests are applicable to the program concerned.

**ADVANCED PLACEMENT COURSES**

Advanced Placement Courses are those for which the College Board has developed a course description and examination and which may be used to meet high school graduation requirements. Advanced Placement courses within the Muncie Community Schools are as follows:

- *Advanced Placement Biology*
- *Advanced Placement Calculus, AB*
- *Advanced Placement Calculus, BC*
- *Advanced Placement Chemistry*
- *Advanced Placement Computer Sciences A*
- *Advanced Placement Computer Science Principles*
- *Advanced Placement English Language and Composition*
- *Advanced Placement English Literature and Composition*
- *Advanced Placement Environmental Science*
- *Advanced Placement Government and Politics: United States*
- *Advanced Placement Microeconomics 1*
- *Advanced Placement Macroeconomics 2*
- *Advanced Placement Physics I, Algebra Based*
- *Advanced Placement Physics II, Algebra Based*
- *Advanced Placement Psychology*
- *Advanced Placement Spanish Language*
- *Advanced Placement Statistics*
- *Advanced Placement Studio Art, 2D*
- *Advanced Placement Studio Art, 3D*
- *Advanced Placement U.S. History*
- *Advanced Placement World History Modern*

*Note:* Students taking an Advanced Placement (AP) Course will be required to take the corresponding AP Exam at the end of the course.

**GIFTED AND TALENTED PROGRAM - HONORS CLASSES**
The Muncie Community Schools, through its Gifted and Talented Program, offers Honors courses to students in grades six (6) through tenth (10). Students are selected for participation in the program based on their academic achievement and standardized test scores, course grades, and teacher recommendations. Parents may also refer their children for program consideration.

**CREDIT RECOVERY**

The Credit Recovery program provides students the opportunity to earn or recover credits needed to graduate on time. Students admitted to the Credit Recovery program utilize APEX software during a regular class period to complete the course requirements for a specific class/credit. Students must meet weekly work goals in order to remain in the program.

The criteria for admission to the Credit Recovery program is as follows:

Student must be on a diploma track and

A. has attempted and failed to complete the traditional academic course at least once prior to consideration, or
B. student is in jeopardy of not graduating with their class due to a lack of credits, or
C. a student who has been withdrawn from a course for other than a serious behavioral problem, or
D. at the discretion of a Muncie Central school administrator.

**CLASS AUDIT**

Students may be allowed to audit a class using the following criteria:

● The student must have the approval of the principal after the student has consulted with the counselor and teacher.
● The student would be on a stand-by basis as class size permits.
● The student must do assignments required of students taking the class for credit.
● The student must adhere to the school's attendance policy.
● The student cannot audit and then later take the class for credit.

A student should see his or her counselor for an application to audit a class, prior to the start of the semester.

**DUAL CREDIT**

Dual credit is when high school students have the opportunity to earn both high school and college credits simultaneously. Dual credit courses are taught by high school faculty, adjunct college faculty or college faculty either at the high school, at the college or university, or sometimes through online courses or distance education.

**Note:** A PSAT, SAT, ACT, and/or a KA score will be used to determine whether a student qualifies to earn dual credit. If a student does not qualify for the dual credit, they may remain in the course and earn HS credit.

**POST-SECONDARY CREDIT**

A local school board shall recognize courses completed in a post-secondary institution in meeting high school graduation requirements provided that:

● the institution is an accredited public or private college or university located in Indiana that grants a baccalaureate or associate degree
● prior approval is obtained as outlined by the local school board policy.

A student should request the post-secondary credit form from his high school counselor.

### EARLY GRADUATION
- Request at the end of Junior Year – At the time of application, the student must have completed 28 credits, or completed all requirements for the Graduation Pathway Diploma.
- Request at the end of the first semester of Senior Year – At the time of application, the student must have 34 credits completed, or completed all requirements for the Graduation Pathway Diploma.
- Request for Early Graduation forms can be obtained from your school counselor. It is advised that the student meets with his or her counselor to verify that the student can meet all requirements before completing, signing, and submitting the Request for Early Graduation forms to the Guidance Office on or before September 1st of each school year.
- The high school principal will initially review the request form and approve or deny the request. If the principal approves the request, the request form must be submitted to the superintendent's office for approval and signature.
- The student will be notified by his or her school guidance counselor if the request has been approved and/or denied.
- A student granted a request to graduate early may participate in the graduation ceremony with their designated class.

### ENROLLMENT ON PASS/FAIL BASIS
Students may elect to take one class each year for one semester on a pass/fail basis.
Only one class may be taken on a pass/fail basis from a subject matter area. Enrollment for pass/fail credit should be requested on the proper form at the time of regular enrollment in a class but must be done before the first day of class. *Courses taken on a pass/fail basis cannot count toward the Core 40, Core 40 with Academic Honors Diploma, or Core 40 with Technical Honors*.

### GRADE PROGRESS REPORTS
Grade cards are distributed at the end of the nine-week grading period. Mid-term progress reports will be provided for each student on four dates specified by the corporation.

### GRADING SCALE
The Muncie Community Schools' 9-12 grade scale is:

| | | |
|---|---|---|
| 90 - 100% | = | A |
| 80 - 89% | = | B |
| 70 - 79% | = | C |
| 60 - 69% | = | D |
| 59% & below | = | F |

## WEIGHTED GRADES
- Weighted grades apply to Honors, AP courses, and some dual credit classes.
- A weighting factor of .2 is multiplied by the total number of weighted courses taken and then divided by the number of semesters completed.
- The quotient is then added to the GPA established by the actual earned grades in all course work.

## HONOR ROLL ELIGIBILITY CRITERIA
There will be three Honor Roll categories for secondary schools:

*4.0 Grade Point Average Honor Roll*
*3.5 Grade Point Average Honor Roll*
*3.0 Grade Point Average Honor Roll*

Additional criteria:
- Honor Roll will be determined from nine-week grades.
- To be eligible, students must be enrolled and earning credit in at least five (5) classes. A course taken on pass/fail option will not count as one of these five (5) classes.
- Students will be ineligible for Honor Roll if they have earned a grade of "F" in any course.

## GRADE REVIEW GUIDELINES
It is the position of the Board of School Trustees of the Muncie Community Schools that grades awarded for student achievement and performance are determined by the student's teacher. This is totally appropriate because only the teacher has adequate information to make these decisions. It is extremely important that students, parents/guardians, and teachers understand this position completely. The following guidelines will be used in working with a request for reviewing a student's grade. The request may be initiated at Step 1 or 2 by the student and/or parent/guardian.
1. A conference with the student and teacher will occur.
2. A conference with parent/guardian and teacher will occur. Other appropriate school personnel may be involved if requested.
3. Formal request for a grade review must be made on the appropriate form within five (5) days following the official date grades are issued.
4. A conference involving a building administrator, parent/guardian, student, teacher, and other appropriate school personnel will be scheduled.
5. Closure of a grade review request will occur within the ten (10) school days following the official date grades are issued.
6. At the end of the school year the formal request must be made on the appropriate form within one (1) week. Closure of the grade review request will occur within two (2) weeks following the official date grades are issued.
7. After closure of the grade review request, a student's grade may be adjusted.

## EXTRA-CURRICULAR ELIGIBILITY

To be eligible for participation in any school-sponsored extracurricular activities, a student must be passing in at least six (6) subjects each grading period and at the end of a semester. At the end of a semester, the semester grades take precedence over the grades earned in the last grading period. A student who is passing in six (6) subjects but maintains less than a 2.0 GPA at the end of a grading period or semester will be required to participate in a before- and after-school study program at least twice a week to maintain eligibility. Failure to participate in the study program will make the student ineligible for participation in extracurricular activities for the grading period. Eligibility will be determined by the last grades officially posted. For example, a student's grades at the end of the second semester will determine eligibility at the beginning of the following year. A student's summer school grades can be used to re-establish lost at the end of the second semester provided the student has passed a total of five (5) combined classes for the second semester and summer school.

A student will be deemed eligible at the end of the first semester in the new level/school of his/her educational career; a student's elementary GPA will not influence his/her eligibility at the middle school level; a student's middle school GPA will not influence his/her eligibility at the high school level.

## COLLEGE ATHLETIC ELIGIBILITY

Students who plan to enroll in college and participate in Division I or Division II athletics must be certified by the National Collegiate Athletic Association (NCAA) Eligibility Clearinghouse. Grade point, SAT, and ACT requirements can be located on the NCAA Eligibility Center website at www.eligibilitycenter.org. Students need to start this process during their sophomore year.

| Division I 16 Core Courses | Division I Qualifier Requirements | Division II 16 Core Courses | Division II Qualifier Requirements |
|---|---|---|---|
| 4 years of English | 16 core courses | 3 years of English | 16 core courses |
| 3 years of Mathematics (Algebra I or higher) | Ten core courses completed before the start of the seventh semester. Seven of the ten must be in English, Math, or Natural physical science. "locked-in" for core-course GPA calculation | 2 years of Mathematics (Algebra I or higher) | Earn at least a 2.200 in your high school core courses |
| 2 years of Natural/Physical Science (1 year of lab if offered by high school) | | 2 years of Natural/Physical Science (1 year of lab if offered by high school) | Earn the SAT or ACT score that matches your core-course GPA on the Division II competition sliding scale. |
| 1 year of additional English Mathematics, or Natural/Physical Science | Corresponding test score (ACT sum score or SAT combined score) and core-course GPA (minimum 2.300) on a sliding scale. | 3 years of additional English, Mathematics, or Natural/Physical Science | |
| 2 years of Social Science | | 2 years of Social Science | |
| 4 years of additional Academic courses (any area above, foreign language or comparative religion/philosophy) | Graduate from high school | 4 years of additional Academic courses (any area above, foreign language or comparative religion/philosophy) | |

**GRADING FORMULA FOR MACC CTE PROGRAMS**

Following the Governor Workforce Cabinet's Next Level Programs of Study (NLPS) course framework, first-year MACC students must complete three two-credit classes over the course of the school year. These courses are generally referred to as the Principles, Concentrator A, and Concentrator B courses. GWC has afforded us the flexibility of offering these courses in sequential order or offering them concurrently.

| Method | Semester 1 | | | Semester 2 | | |
|---|---|---|---|---|---|---|
| Sequential | Principles (2 cr) | | Conc. A (1 cr) | Conc. A (1 cr) | Conc. B (2 cr) | |
| Concurrent | Principles (1 cr) | Conc. A (1 cr) | Conc. B (1 cr) | Principles (1 cr) | Conc. A (1 cr) | Conc. B (1 cr) |

**INTERNSHIPS – CTE PROGRAMS**

Internship experiences are required in some career and technical education program areas and optional for others, and sometimes limited to senior level students. Internships may be paid or unpaid, and students must meet all required criteria to participate, as well as provide their own transportation.

**INDUSTRY CERTIFICATION**

Career & Technical Education programs provide students the opportunity to develop the knowledge and skills required to earn industry certification. Examples include:

- Automotive Service Excellence (ASE)
- National Center for Construction Education & Research (NCCER)
- American Welding Society (AWS)
- Manufacturing Skills Standards Council
- Indiana Certified Nursing Assistant (CNA)
- State Board of Cosmetology
- Emergency Responders Certification

**RETAKING A COURSE**

Students are permitted to retake a course for a higher grade that will be recorded in the student's record. If a student elects to retake a course, both grades will be included in the calculations of the grade point average; however, only one (1) credit may be counted toward the graduation requirements.

**RECEIVING CREDITS BY DEMONSTRATING PROFICIENCY** (Indiana Code § 20-36-5-1)

A student shall receive credits toward graduation or an academic honors diploma by demonstrating the student's proficiency in a course or subject area required for graduation or the academic honors diploma, whether or not the student has completed course work in the subject area, by any one (1) or more of the following methods:

1) Receiving a score that demonstrates proficiency on a standardized assessment of academic or subject area competence that is accepted by accredited postsecondary educational institutions

2) Receiving a high proficiency level score on an end-of-course assessment for a course without taking the course.
3) Successfully completing a similar course at an eligible institution under the postsecondary enrollment program under IC 21-43-4.
4) Receiving a score of three (3), four (4), or five (5) on an advanced placement examination for a course or subject area.
5) Other methods approved by the State Board of Education.

**SCHEDULE CHANGES**
Schedule requests must be made within the first two weeks of each semester for full consideration. For any requests after that date see the section Withdraw from Class below. All schedule change requests are subject to counselor, teacher, and/or administrative discretion.

**SCHOOL FORMS**
Students should speak to their counselor if they wish to obtain one of the following forms:
• Application to Audit a Course
• Request for Enrollment on a Pass/Fail Basis
• Application for Post-Secondary Program
• Application to Retake a Course
• Request for Early High School Graduation

**SPECIAL EDUCATION**
Muncie Community Schools has a goal of providing full educational opportunity to all eligible students with disabilities in compliance with Title 511, Article 7, Rules 17-31. A continuum of special education placements, in the least restrictive environment, is available. These services are available for eligible students at least 3 years of age, but less than 22 years of age, as deemed appropriate by the case conference committee. Students participating in special education have available to them the same variety of educational programs and services available to all students.

Each year a case conference committee reviews and, if necessary, revises the student's individualized education program (IEP). The appropriate educational modifications/accommodations and special education services are determined by the case conference committee. Also, determined at that time, is the extent to which each student will participate in general education courses/programs, including non-instructional, non-academic, and extra-curricular activities for which the student is eligible. It is important for each student, as appropriate, and his/her parents or guardians to attend the conference and participate in program planning and course selection. If any student or parent has questions about his/her IEP, he or she should contact the building case conference coordinator immediately.

**WITHDRAWAL FROM CLASS**

If a student wishes to drop a course after the two week mark they must meet with their counselor to discuss possibilities. Students are required to complete a course change request form, and may receive a WD/F on their transcript. All course changes are subject to counselor, teacher, and/or administrative approval.

**FRESHMAN SEMINAR**

Freshman Seminar is a course designed to cover the myriad of topics that a new high school student needs to know for social and academic success.  Lessons range from stressing the importance of school spirit, to learning effective note-taking and study skills, to getting along with others, to writing college applications, and much more.  The specific curriculum in each section of Freshman Seminar will change based on the needs of the students in class.  Freshman Seminar allows students a dedicated time to focus on their future and understand what it takes to be successful in high school, post-secondary, and future careers.  Freshman Seminar will be scheduled just like any other course and students will have the opportunity to earn competency-based credits at the end of each semester.

**FRESHMAN ACADEMY**

Freshman Academy is designed to help incoming freshmen transition into high school by creating a supportive environment for students and to address their academic and social needs.  Each freshman will be grouped together on a team composed of the same core subject area teachers who will provide focused attention to students on their respective teams.  The goal of Freshman Academy is to establish a solid foundation for each student and to have a successful high school experience.

**MUNCIE CENTRAL HIGH SCHOOL HONORS GRADUATE POLICY**

Muncie Central High School offers a variety of academic courses to meet the various needs and goals of students. These courses include Advanced Placement (AP), Dual-Credit, Career and Technical Education (CTE), the arts, Science Technology Engineering and Math (STEM), and technology-based courses through both traditional and alternative school placements for students.  In addition, Muncie Central High School provides extra-curricular and co-curricular activities as well as athletic programs to enhance students' educational experiences.

**For the class of 2026 and beyond**

Honor Graduates will be recognized through a special listing in the commencement program, special recognition during the commencement ceremony, the presentation of an honor cord, and the placement of their name on the Honor Plaque.

Outstanding graduates meeting the following criteria are designated Honor Graduates:

1.      Meet all graduation requirements.

2.      An overall GPA of 3.5

3.      Attend both semesters of the senior year.

Students will be recognized for having met the established unique requirements for graduating cum laude, magna cum laude, or summa cum laude.  Students who graduate with a GPA of 3.5 or higher will be recognized as having graduated with distinction according to the criteria listed below.  The final transcript will carry the designation of cum laude, magna cum laude, or summa cum laude.

**Cum Laude** – "with praise" – This recognition is for students graduating with a GPA of 3.5 – 3.74.  Students will be recognized with a single white cord to be worn at senior recognition events and Commencement.

**Magna Cum Laude** – "with great praise" – This recognition is for students graduating with a GPA of 3.75 – 3.99 GPA.  Students will be recognized with a single silver cord to be worn at senior recognition events and Commencement.

**Summa Cum Laude** – "with highest praise" or "with highest honor" – This recognition is for students graduating with a GPA of 4.0 or higher.  Students graduating with summa cum laude will be recognized with a single gold cord to be worn at senior recognition events and Commencement.

# ENGLISH/LANGUAGE ARTS

**1002 <u>Honors English 9-1</u>**
**1002 <u>Honors English 9-2</u>**

Freshman Honors English integrates literature, composition, advanced vocabulary study, and oral communication. Students develop their use of language and literature as a tool for critical and analytical thinking and as a source of pleasure. It utilizes a literary canon from different cultures and periods of general literature for a source of understanding of the world. Emphasis is placed on various literary genres. Composition components include persuasive writing, reasoning to support a hypothesis, research, special projects, related papers, annotated bibliographies, and the use of the Modern Language Association (MLA) format. Oral communication emphasizes the effective presentation of literature-related projects, opportunities for impromptu, informative, and persuasive communications, and defense of point of view in discussion.

**1002 <u>English 9-1</u>**
**1002 <u>English 9-2</u>**

English 9 is a study of language, literature, composition, and oral communication with a focus on exploring a wide variety of genres and their elements. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance appropriate for Grade 9 in classic and contemporary literature balanced with nonfiction. Students write short stories, responses to literature, expository and argumentative/persuasive compositions, research reports, business letters, and technical documents. Students deliver grade-appropriate oral presentations and access, analyze, and evaluate online information.

**1002A <u>Applied English 9-1</u>**
**1002A <u>Applied English 9-2</u>**

Applied English 9 is a study of language, literature, composition, and communication, focusing on literature and nonfiction within an appropriate level of complexity for each individual student. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to a variety of texts. Students form responses to literature, expository (informative), narrative, and argumentative/persuasive compositions, and research tasks when appropriate. Students deliver ability-appropriate presentations with attention to audience and purpose and access, analyze, and evaluate online information.

**1010 <u>English/Language Arts Lab</u>**
**1010 <u>English/Language Arts Lab</u>**

Language Arts Lab is a supplemental course that provides students with additional support in reading comprehension and writing skill development. The major focus of the class is on the Indiana writing standards. All students should be concurrently enrolled in an English course in which class work will address all of the Indiana Academic Standards. The course does <u>not</u> meet English credit requirements for graduation.

**1010A <u>Applied English/Language Arts Lab</u>**
**1010A <u>Applied English/Language Arts Lab</u>**

Applied Language Arts Lab is a supplemental course that provides students with individualized or small group instruction designed to support skills and content aligned to Indiana Academic Standards or Content Connectors for English/Language Arts. All students should be concurrently enrolled in an English course or have met the ELA requirements for the Certificate of Completion.

**1004 <u>Honors English 10-1</u>**
**1004 <u>Honors English 10-2</u>**

This course integrates literature, composition, advanced vocabulary study focusing on SAT preparation, and oral communication. Literature selections frame the basis for exploring the reasoning process through analysis and interpretation and extensive essay writing. Students will be expected to complete a research project.

Opportunities will be presented for impromptu, informative, and persuasive discussions, oral presentations, and defense of point of view. The composition component of this course will provide students with an understanding of the elements of descriptive, narrative, and expository writing, citing support passages from literature to defend written arguments, points of view, informed opinions, and written responses on a topic. An SAT preparatory unit on vocabulary development is emphasized. This course expects students to produce a far greater volume, complexity, and depth of reading and writing than English 10.

**1004 <u>English 10-1</u>**
**1004 <u>English 10-2</u>**

English 10 is a study of language, literature, composition, and oral communication, focusing on literature with an appropriate level of complexity for this grade band. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance in classic and contemporary literature balanced with nonfiction. Students write responses to literature, expository (informative) and argumentative/persuasive compositions, and sustained

research assignments. Students deliver grade-appropriate oral presentations with attention to audience and purpose and access, analyze, and evaluate online information.

**1004 <u>Applied English 10-1</u>**
**1004 <u>Applied English 10-2</u>**
Applied English 10, an integrated English course based on the Indiana Content Connectors for English/Language Arts in Grades 9-10, is a study of language, literature, composition, and communication, focusing on literature and nonfiction within an appropriate level of complexity for each individual student. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to a variety of texts. Students form responses to literature, expository (informative), narrative, and argumentative/persuasive compositions, and research tasks when appropriate. Students deliver appropriate presentations with attention to audience and purpose and access, analyze, and evaluate online information.

**1006 <u>English 11-1</u>**
**1006 <u>English 11-2</u>**
**1006 <u>English 11-1/ ENGL 111 Ivy Tech</u>**
**1006 <u>English 11-2/ ENGL 215 Ivy Tech</u>**
English 11, an integrated English course based on the Indiana Academic Standards for English/Language Arts in Grades 11-12, is a study of language, literature, composition, and oral communication focusing on literature with an appropriate level of complexity for this grade band. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance appropriate in classic and contemporary literature balanced with nonfiction. Students write narratives, responses to literature, academic essays (e.g. analytical, persuasive, expository, summary), and more sustained research assignments incorporating visual information in the form of pictures, graphs, charts and tables. Students write and deliver grade-appropriate multimedia presentations and access, analyze, and evaluate online information.

**1006 <u>Applied English 11-1</u>**
**1006 <u>Applied English 11-2</u>**
Applied English 11, an integrated English course based on the Indiana Content Connectors English/Language Arts in Grades 9-10 and applicable employability skills. This course is a study of language, literature, composition, and communication focusing on literature with an appropriate level of complexity for each individual student. Students analyze, compare and evaluate a variety of classic and contemporary literature and nonfiction texts, including those of historical or cultural significance. Students write narratives, responses to literature, academic responses (e.g. analytical, persuasive, expository, summary), and research tasks when appropriate. Students

analyze and create visual information in the form of pictures, graphs, charts, and tables. Students write and deliver grade-appropriate multimedia presentations and access online information.

**1008 English 12-1**
**1008 English 12-2**

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

**1008 Applied English 12-1**
**1008 Applied English 12-2**

Applied English 12, an integrated English course based on the Indiana Content Connectors English/Language Arts in Grades 9-10 and applicable employability skills. This course is a study of language, literature, composition, and communication focusing on literature with an appropriate level of complexity for each student. Students analyze, compare, and evaluate a variety of classic and contemporary literature and nonfiction texts, including those of historical or cultural significance. Students write narratives, responses to literature, academic responses (e.g. analytical, persuasive, expository, summary), and research tasks when appropriate. Students analyze and create visual information in the form of pictures, graphs, charts, and tables. Students write and deliver grade-appropriate multimedia presentations and access online information.

**1056 AP English Language and Composition 1**
**1056 AP English Language and Composition 2**

AP English Language and Composition is a course based on the content established and copyrighted by the College Board. The course focuses on the development and revision of evidence-based analytic and argumentative writing and the rhetorical analysis of nonfiction texts. The course aligns to an introductory college-level rhetoric and writing curriculum, which requires students to develop evidence-based analytic and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Throughout the course, students develop a personal style by making appropriate grammatical choices.

Additionally, students read and analyze the rhetorical elements and their effects in non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods. There is no prescribed sequence of study. Students will be expected to take the AP exam upon completion of the course.

## 1058 AP English Literature and Composition 1
## 1058 AP English Literature and Composition 2

AP English Literature and Composition is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. The course engages students in the close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, symbolism, and tone. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. Students will be expected to take the AP exam upon completion of the course.

## 1094 Expository Writing

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

## 1092 Creative Writing

Creative Writing is a study and application of the rhetorical writing strategies for prose and poetry. Using the writing process, students demonstrate a command of vocabulary, the nuances of language and vocabulary, English language conventions, an awareness of the audience, the purposes for writing, and the style of their own writing. Courses can be offered in conjunction with a literature course, or schools may embed Indiana Academic Standards for English/Language Arts reading standards within curriculum.

## 1070 Debate 1

Debate is the study and application of the basic principles of debate involving support for the basic types of arguments (induction, deduction, causation) and debate strategies (affirmative or negative argument construction and extension, case development, refutation or rebuttal of argument claims and evidence, and persuasive speaking).

## 1060 Etymology

Etymology, a language studies course based on the Indiana Academic Standards for English/Language Arts, is the study and application of the derivation of English words and word families from their roots in ancient and modern languages (Latin, Greek, Germanic, and Romance Languages). Students analyze meanings of English words by examining roots, prefixes, and suffixes. Students analyze the connotative and denotative meaning of words in a variety of contexts and the reasons for language change. Students write about word history and semantics in texts that require etymological sensitivity, such as Renaissance poetry or works in translation.

## 1080 Journalism 1
## 1080 Journalism 2

Journalism is a study of news elements, journalism history, First Amendment law, ethics, fact and opinion, copy editing, news, and features as they apply to print and digital media products. It includes a comparison study of journalistic writing to other types of English writing with practical application of news, features, editorials, reviews, columns, and digital media writing forms. For the second credit: Students continue to develop journalistic writing skills in addition to studying graphic design, advertising, public relations, photojournalism, and emerging media development and design. By the end of the semester, students write, shoot, and design stories for print and digital media products.

## 1086 Student Media/Newspaper Production 1
## 1086 Student Media/Newspaper Production 2
## OR
## 1086 Student Media/Yearbook Production 1
## 1086 Student Media/Yearbook Production 2

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

## 1084 Digital Media 1
## 1084 Digital Media 2

Mass Media, a course based on the High School Journalism Standards and the Mass Media and Media Literacy Standards, is the study of the importance of mass media as pervasive in modern life at the local, national, and global levels. It includes a study of the impact of constant and immediate news, entertainment, and persuasive messages on everyday life. Students use

course content to become knowledgeable consumers of mass media in preparation for their roles as informed citizens in a democratic society. For the second credit: Students continue to critically analyze mass media products and messages as they influence societal rules. By the end of the semester, students complete a multimedia project comparing different aspects of a topic of interest or concern.

## 1076 Speech

Speech is the study and application of the basic principles and techniques of effective oral communication. Students deliver focused and coherent speeches that convey clear messages, using gestures, tone, and vocabulary appropriate to the audience and purpose. Students deliver different types of oral and multimedia presentations, including viewpoint, instructional, demonstration, informative, persuasive, and impromptu. Students use the same Standard English conventions for oral speech that they use in their writing. Speech 2 will focus on leadership development, listening skills, oral interpretation, parliamentary procedure, discussion, research method, and oral debate.

## 1078 Adv Speech/Communication 101 Ivy Tech

Advanced Speech and Communication, a course based on the Indiana Academic Standards for English/Language Arts and emphasizing the High School Speech and Communication Standards, is the study and application of skills in listening, oral interpretation, media communications, research methods, and oral debate. Students deliver different types of oral and multimedia presentations, including speeches to inform, to motivate, to entertain, and to persuade through the use of impromptu, extemporaneous, memorized, or manuscript delivery.

## 1020 American Literature

American Literature is a study of representative works and authors of the United States. Students read, analyze, evaluate, critique, and actively respond to a wide variety of literary genres that reflect American culture, including quality works of various ethnic and cultural minorities. Students compare readings and media from literature, history, and other subjects by demonstrating how the ideas and concepts presented in the works are interconnected, distinctly American, and important to an understanding of the development of the current culture.

## 1022 Biblical Literature

The Bible is read from a literary standpoint in this course. Biblical Literature surveys the Bible as a source of a wide variety of literary genres, patterns, themes, and conventions. Different books from the Bible are read in relation to their times. In addition, this course provides a basis for understanding Biblical references (allusions) in both classical and modern literature. Related

literature is included as it pertains to Biblical themes. Writing and discussion opportunities are included in the context of this course.

### 1026 Classical Literature

Classical Literature surveys Greek and Roman literature, including a survey of great authors. This course includes the study of a variety of literary genres. Possible themes include the transition from oral to literate cultures, the emergence of cities and empires, the use of mythology, and the rise and fall of democracy. Influences of classical literary patterns, themes, and conventions on modern literature may also be explored. Emphasis is placed on reading, oral discussion, and written discourse.

### 1120 Developmental Reading

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

### 1120A Applied Developmental Reading

Applied Developmental Reading is a supplemental course that provides students with individualized, specially designed instruction to support success in completing coursework aligned with the Indiana Academic Standards or Content Connectors for English/Language Arts.

### 1030 English Literature (British)

English Literature is a study of representative works of the English-speaking authors associated with the Commonwealth of Nations, including England, Scotland, Ireland, Wales, Canada, Newfoundland, Australia, New Zealand, India, South Africa, Kenya, Botswana, and others. Students examine a wide variety of literary genres that reflect the English-speaking peoples from the Anglo-Saxon Period to the present. Students analyze how the ideas and concepts presented in the works are both interconnected and distinctly reflective of the cultures and the countries in which they were written.

### 1090 Composition

Composition is a study and application of the rhetorical writing strategies of narration, description, exposition, and persuasion. Using the writing process, students demonstrate a command of vocabulary, English language conventions, research and organizational skills, an awareness of the audience, the purpose for writing, and style. Students read classic and contemporary literature or articles and use appropriate works as models for

writing. Students write a variety of types of compositions with a focus on fictional narratives, reflective compositions, academic essays, and responses to literature.

## 1090A Applied Composition

Applied Composition, a course based on the Indiana Academic Standards or Content Connectors for English/Language Arts, is a study and application of the rhetorical writing strategies of narration, description, exposition, and persuasion. Using the writing process, students demonstrate a command of vocabulary, English language conventions, research and organizational skills, an awareness of the audience, the purpose for writing, and style.

## 1098 Advanced Composition

Advanced Composition is a study and application of the rhetorical writing strategies of exposition and persuasion. Students write expository critiques of nonfiction selections, literary criticism of fiction selections, persuasive compositions, and research reports in addition to other appropriate writing tasks.

## 1050 Twentieth Century Literature

Twentieth Century Literature is a study of twentieth-century literature in the United States, the British Isles, and Europe with a focus on major works and writers in the Modern Period, the Harlem Renaissance, Early Contemporary Literature and Contemporary Literature from a chronological or thematic perspective. Students examine a variety of genres including novels, short stories, poetry, dramas, science fiction, and others. Students analyze how the writers and their works either reflected or influenced the issues of the time.

## 1044 Poetry

Poetry is a study of poetic works, the interpretation of poetry, and the variety of structures, devices, and themes that differentiate one type of poetry from another. Students examine a wide variety of major poetic works from the English-speaking world and English translations of important works from the non-English-speaking world. Students analyze the impact of aural devices, such as meter, alliteration, assonance, and rhyme, on the overall interpretation of a poem and how poetry is a form of literary expression that has prevailed through the ages.

## 1124 Creative Writing English 12-2/ENGL 202

Advanced English/Language Arts, College Credit, is an advanced course based on the Indiana Academic Standards for English/Language Arts in grades 11 and 12. This course title covers any English language and composition advanced course offered for credit by an accredited post-secondary institution through an adjunct agreement with a secondary school.

**4790 <u>Introduction to Communications</u>**
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. Students will use the design process to solve design projects in each communication area.

# FINE ARTS - MUSIC

**4160 <u>Beginning Concert Band 1(L)</u> (Varsity Band)**
**4160 <u>Beginning Concert Band 2(L)</u> (Varsity Band)**
This course is provided for students with developing instrumental performance skills. This course offers a variety of activities in the course of a year. Instruction is designed to enable students to connect, examine, imagine, define, try, extend, refine, and integrate music study into other subject areas. Time outside the school day may be scheduled for dress rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to participate in performance opportunities outside the school day that support and extend the classroom.

**4170 <u>Advanced Honors Concert Band 1(L)</u> (Symphony Band)**
**4170 <u>Advanced Honors Concert Band 2 (L)</u> (Symphony Band)**
This course is provided for students with highly developed instrumental performance skills. This course offers a variety of activities in the course of a year. Advanced Concert Band provides students with a balanced comprehensive study of music. Activities are designed to develop elements of musicianship including, but not limited to, tone production, technical skills, intonation, music reading skills, listening skills, analyzing music, and studying historically significant styles of literature. Experiences include, but are not limited to, improvising, conducting, playing by ear, and sight-reading. Time outside the school day may be scheduled for dress rehearsals and performances. A limited number of public performances may serve as a culmination of daily rehearsal and musical goals. Students are required to

participate in performance opportunities outside the school day that support and extend the classroom. Band repertoire must be of the highest caliber. Mastery of advanced wind band technique must be evident. Areas of refinement consist of advanced techniques including, but not limited to, intonation, balance and blend, breathing, tone production, tone quality, technique, rhythm, sight-reading, and critical listening skills. Evaluation of music and music performances are included.

**4142 <u>Dance Choreography 1</u> (Color Guard)**
**4142 <u>Dance Choreography 2</u> (Color Guard)**
A wide variety of learning activities, materials, and experiences are used in order to provide students with the knowledge, skills, and appreciation of the multi-styled and multicultural performance expressions. Students experience and learn to use appropriate terminology to describe, analyze, interpret, and critique dance compositions by professional individuals. Time outside the school day may be scheduled for dress rehearsals and performances. Public performances will serve as a culmination of daily rehearsal and performance goals. Students are required to participate in performance opportunities outside the school day that support and extend the classroom.

**4164 <u>Jazz Ensemble 1 (L)</u>**
**4164 <u>Jazz Ensemble 2 (L)</u>**
This course is provided for advanced instrumental music students. Students taking this course develop musicianship and specific performance skills through group and individual settings for the study and performance of the varied styles of instrumental jazz. The instruction includes the study of the history, formative, and stylistic elements of jazz. Students develop their creative skills through improvising, performing, listening, and analyzing. A limited amount of time outside the school day may be scheduled for dress 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 the school day that support and extend learning in the classroom.

**4182 <u>Beginning Chorus/Singers/Mixed (L)</u>**
**4182 <u>Beginning Chorus/Singers/Women (L)</u>**
This is a non-auditioned mixed choir. Opportunity is also available for participation in a non-auditioned female chorus. Activities in this class are designed to cover many styles and aspects of music. Students must participate in rehearsal and performance opportunities outside the school day that support and extend learning in the classroom. Outfit cost, if any, is minimal, and fund raising opportunities are provided. Activities in this class create the development of quality repertoire in the different styles of choral literature.

**4186 <u>Intermediate Chorus/Sweethearts (L)</u>**

This is a non-auditioned mixed choir. Activities in this class are designed to cover many styles and aspects of music. Students must participate in rehearsal and performance opportunities outside the school day that support and extend learning in the classroom. Outfit cost, if any, is minimal, and fund raising opportunities are provided.

**4188 <u>Advanced Chorus (L)</u>**
**4188 <u>Swing Choir</u>**
**4188 <u>Select</u>**
**4188 <u>Sensations</u>**

Students taking Advanced Chorus develop musicianship and specific performance skills through ensemble and solo singing. The Advanced Chorus may be composed of female chorus or mixed chorus. Activities in this class focus on vocal technique, sight-reading, and performance of a wide variety of literature with an emphasis on choreography as appropriate. A special outfit for performances will be required. Fundraising opportunities are provided.

**4206 <u>Music History and Appreciation</u>**

This course is for students who are interested in learning about many styles and forms of music by listening to, reading about, and analyzing the music of various cultures and time periods. Students may have opportunities to attend live concerts, examine relationships between music and other disciplines, research a particular style of music, or complete a creative project related to the course.

**4208 <u>Music Theory and Composition I (L)</u>**

This course is for students who are seriously interested in studying the structure and analysis of music. Students will examine the fundamentals of music theory through written and aural exercise. Students will develop skills in ear training and dictation, compose works that illustrate mastered concepts, understand harmonic structures and analysis, understand modes and scales, study a wide variety of musical styles, study traditional and non-traditional music notation and sound sources as tools for musical composition, and receive detailed instruction in other basic elements of music. Experience in vocal or instrumental music is recommended.

**4208 <u>Music Theory and Composition 1 (L)</u>**
**4208 <u>Music Theory and Composition 2 (L)</u>**

This course will build on sequential learning experiences in developing skills in the analysis of music and theoretical concepts. Students will study a wide variety of musical styles and practice music arranging and composition. Students will build on basic skills in ear training and dictation skills, composing works that illustrate mastered concepts, understanding harmonic structures and analysis, understanding modes and scales, studying a wide variety of

musical styles, studying traditional and non-traditional music notation and sound sources as tools for musical composition, and receiving detailed instruction in other basic elements of music. Experience in vocal or instrumental music is recommended. Students will have the opportunity to experience live performances by professionals during and outside the school day.

# FINE ARTS – THEATRE

**4242 Theatre Arts (L)**

Students will learn to improvise and write plays or scenes, imaginatively express thoughts, feelings, moods, and characters, and apply techniques involving voice, gesture, facial expression, and body movement to reproduce the subtleties of language and voice inflection in conveying emotion and meaning. Students will develop skills enabling them to speak clearly and expressively with appropriate articulation, pronunciation, volume, stress, rate, pitch, inflection, and intonation. Through the study of technical theatre and scripts, students will focus on solving the problems faced by actors, directors, and technicians.

**4244 Technical Theatre 1 (L)**
**4244 Technical Theatre 2 (L)**

Technical Theatre combines the theories of design and stagecraft with the construction and operation of the various elements of technical theatre. Students will have opportunities to develop stagecraft skills; learn various techniques in scenery, lighting, sound, properties, costumes, and makeup; practice theatre safety, and learn effective stage management, business plans, and promotional techniques.

**4246 Theatre Arts History**

Instruction in this course provides students with sequential learning activities designed to explore the nature of theatre and its major style periods. Students learn context by examining the impact of film, television, and electronic media upon theatre as a whole. Students will study plays that reflect a wide variety of styles, historical periods, and cultures; study the elements of theatrical work including exposition, rising action, climax, and conclusion, and study the elements of play production.

**4248 Theatre Production (L)**

Instruction in Theatre Production is a co-curricular laboratory for the exploration, development, and synthesis of all of the elements of theatre. Practical hands-on experiences in acting, directing, and stagecraft will be provided through the preparation and public performances of one or more plays. The production of a play supplements the Technical Theatre and

Theatre Arts courses, which concentrate on theories, information, and techniques, by providing for the integration and implementation of those ideas and skills.

### 4210 Advanced Theatre Arts (L)

This course builds on the progressive, sequential learning experiences of Theatre Arts. Students will read and analyze plays and will draw on events and experiences to create scripted monologues and scenes. They will create scenic designs for existing plays and will build characters through observation, improvisation, and script analysis. These activities will incorporate elements of theatre history, culture, analysis, response, creative process and integrated studies. This class offers an in-depth study of technical design and acting.

### 0518 Musical Theatre

Musical Theatre is based on the Indiana Academic Standards for Theatre. Students in this course study the history of musical theatre and its place in today's society. They participate in staging, choreographing, rehearsing, and performing an original or existing musical work. This class may be taught collaboratively among music, theatre, dance, and visual arts faculty. These activities should incorporate elements of theatre history, culture, analysis, response, creative process, and integrated studies. Additionally, students explore career opportunities in the theatre, attend and critique theatrical productions, and recognize the responsibilities and the importance of individual theatre patrons in their community.

### 4250 Advanced Acting

Advanced Acting is based on the Indiana Academic Standards for Theatre. Students enrolled in Advanced Acting research, create, and perform characters through script analysis, observation, collaboration and rehearsal. These activities should incorporate elements of theatre history, culture, analysis, response, creative process and integrated studies. Additionally, students explore career opportunities in the theatre by attending plays, meeting actors and discussing their work, and becoming theatre patrons in their community.

# FINE ARTS – VISUAL ARTS

### 4060 Drawing (L)

Drawing is a course based on the Indiana Academic Standards for Visual Art. Students in drawing engage in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and lead to the creation of portfolio quality works. Students create drawings utilizing processes such as sketching, rendering, contour, gesture, and perspective

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

### 4064 Painting (L)

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 acrylic 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.

### 4000 Introduction to Two-Dimensional Art (L)

This course is an introductory course that engages students in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and will lead to the creation of portfolio-quality works. Students are introduced to two-dimensional design problems in the areas of drawing, painting, printmaking, computer graphics, and commercial design. Basic elements of design such as value, composition, texture, line, and color theory and how these are used in solving two-dimensional design problems are stressed.

### 4002 Introduction to Three-Dimensional Art (L)

This course is an introductory course that engages students in sequential learning experiences that encompass art history, art criticism, aesthetics, and production and will lead to the creation of portfolio quality works. This course introduces students to three-dimensional design problems in the areas of ceramics, jewelry, sculpture, and textiles/fibers. The course will include additional units that are relief and/or free standing where basic elements of design (mass, space, texture, and composition) are stressed using a variety of materials such as wood, metal, plastics, clay, and fibers. Students will create works of art, reflect upon the outcomes of those experiences, explore historical connections, write about the process, make presentations about their progress at regular intervals, work individually and in groups, find a direct correlation to other disciplines, and explore career options in visual art.

Students will utilize art museums, galleries, studios, and community resources.

**Advanced Two-Dimensional Art Courses**

**4004 <u>Advanced Two-Dimensional Art I-I (L)</u>**
**4004 <u>Advanced Two-Dimensional Art I-2 (L)</u>**
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 I 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.

**4004 <u>Advanced Two-Dimensional Art II-I (L)</u>**
**4004 <u>Advanced Two-Dimensional Art II-2 (L)</u>**
This course builds on the sequential learning experience of Advanced Two-Dimensional Art II that encompasses art history, art criticism, aesthetics, and production leading to the creation of portfolio quality works. Students will create works of art, reflect upon the outcomes of those experiences, explore historical connections, write about the process, make presentations about their progress at regular intervals, work individually and in groups, find a direct correlation to other disciplines, and explore career options in visual art. Students will utilize art museums, galleries, studios, and community resources.

Students will develop and apply painting skills using a variety of media, tools, and processes to create works that reflect an understanding of core concepts, create works of art that demonstrate an understanding of color theory (mixing, schemes, uses/symbolism, and effects produced), and research the history of art objects and styles to determine their origin, history, meaning and relate these findings to their work. Students will demonstrate skill in observation from real life to the present creating convincing, accurately rendered objects in a variety of media. Students will list and describe the similarities and differences in common within the artwork from various Western and non-Western cultures.

**4050 <u>AP Studio Art 2 D-1 (L)</u>**
**4050 <u>AP Studio Art 2 D-2 (L)</u>**

Based on the content established by the College Board. Portfolios are designed for students who are seriously interested in the practical experience of art. AP Studio Art is not based on written examination; instead, students submit portfolios for evaluation at the end of the school year.

**Advanced Three-Dimensional Art Courses**

**4006 <u>Advanced Three-Dimensional Art I-I (L)</u>**
**4006 <u>Advanced Three-Dimensional Art I-2 (L)</u>**
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 skills. They identify ways to utilize and support art museums, galleries, studios, and community resources.

**4006 <u>Advanced Three-Dimensional Art II-I (L)</u>**
**4006 <u>Advanced Three-Dimensional Art II-2 (L)</u>**
This course builds on sequential learning experiences of Advanced Three-Dimensional Art II that encompass art history, art criticism, aesthetics, and production and will lead to the creation of portfolio-quality works. This course provides students with opportunities to explore three-dimensional design problems in the areas of ceramics, jewelry, sculpture, and textiles/fibers. The course will include additional units that are relief and/or free-standing where basic elements of design (mass, space, texture, and composition) are stressed using a variety of materials such as wood, metal, plastics, clay, and fibers. Students create works of art, reflect upon the outcomes of those experiences, explore historical connections, write about the process, make presentations about their progress at regular intervals, work individually and in groups, find a direct correlation to other disciplines, and explore career options in visual art. Students will utilize art museums, galleries, studios, and community resources. Students will continue to develop skill in converting ideas into three-dimensional form as objects in a variety of media.
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 skills. They identify ways to utilize and support art museums, galleries, studios, and community resources.

### 4040 Ceramics (L)

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

### 4042 Jewelry (L)

Jewelry is a course based on the Indiana Academic Standards for Visual Art. Students in Jewelry 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 jewelry design and fabrication techniques including, sawing, piercing, filing, and soldering. 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.

### 4052 AP Studio Art 3 D-1 (L)
### 4052 AP Studio Art 3 D-2 (L)

Based on the content established by the College Board. Portfolios are designed for students who are seriously interested in the practical experience of art. AP Studio Art is not based on written examination; instead, students submit portfolios for evaluation at the end of the school year.

# MATHEMATICS

### 2554 Integrated Mathematics I-1
### 2554 Integrated Mathematics I-2

Integrated Mathematics I formalizes and extends the mathematics students learn in the middle grades.  The critical areas deepen and extend understanding of linear relationships, in part by contrasting them with

exponential phenomena, and in part by applying linear models to data that exhibit a linear trend.  Integrated Mathematics I use properties and theorems involving congruent figures to deepen and extend understanding of geometric knowledge from prior grades.  The final unit in the course ties together the algebraic and geometric ideas studied.  The eight Process Standards for Mathematics apply throughout the course.  Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**2556 <u>Integrated Mathematics II-1</u>**
**2556 <u>Integrated Mathematics II-2</u>**
Integrated Mathematics II focuses on quadratic expressions, equations, and functions; by comparing their characteristics and behavior to those of linear and exponential relationships from Integrated Mathematics I.  The need for extending the set of rational numbers arises and real and complex numbers are introduced so that all quadratic equations can be solved.  The link between probability and data is explored through conditional probability and counting methods, including their use in making and evaluating decisions.  The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships.  Circles, with their quadratic algebraic representations, rounds out the course.  The eight Process Standards of Mathematics apply throughout the course.  Together with the content standards, the process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**2558 <u>Integrated Mathematics III-1</u>**
**2558 <u>Integrated Mathematics III-2</u>**
Integrated Mathematics III provides students the opportunity to pull together and apply the accumulation of learning that they have from their previous courses.  They apply methods from probability and statistics to draw inferences and conclusions from data.  Students expand their repertoire of functions to include polynomial, rational, and radial functions.  They expand their study of right triangle trigonometry to include general triangles.  Finally, students bring together all of their experiences with functions and geometry to create models and solve contextual problems.  The eight Process Standards for Mathematics apply throughout the course.  Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**2520 <mark>Honors Algebra I-1</mark>**
**2520 <mark>Honors Algebra I-2</mark>**

<mark>This course, through an accelerated pace, covers all topics in Algebra I and allows time for enrichment of those topics as well as a rigorous, in-depth study of additional concepts. This course will advance student knowledge in methods of analyzing, solving, and using quadratic functions.</mark>

**2520 Algebra I-1**
**2520 Algebra I-2**

Algebra I formalizes and extends the mathematics students learned in the middle grades. Algebra I is made up of six strands: Real Numbers and Expressions; Functions; Linear Equations, Inequalities, and Functions; Systems of Equations and Inequalities; Quadratic and Exponential Equations and Functions; and Data Analysis and Statistics. These critical areas deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend. Students will also engage in methods for analyzing, solving, and using quadratic functions. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**2520A Applied Algebra I-1**
**2520A Applied Algebra I-2**

Applied Algebra I extends the mathematics students learned in the middle grades. Algebra I is made up of 5 strands: Numbers Sense; Expressions and Computation; Linear Equations, Inequalities, and Functions; Systems of Equations and Inequalities; and Quadratic and Exponential Equations and Functions. The strands are further developed by focusing on the content of the Algebra content connectors.

**2516 Algebra I-1 Lab**
**2516 Algebra I-2 Lab**

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.


## 2516A Applied Algebra I-1 Lab
## 2516A Applied Algebra I-2 Lab

*Applied Algebra I Lab* is a mathematics support course. Algebra I Lab should be taken while students are concurrently enrolled in a math course or have met the math requirements for the certificate of completion. This course provides students with additional time to build the foundations necessary for high school math courses and work on specific, individualized math skills, while concurrently having access to rigorous, grade-level appropriate courses. The five critical areas align with the critical areas of Math: Number Sense; Computation; Data Analysis; Geometry and Measurement; and Algebraic Thinking. Algebra I Lab combines standards from high school courses with foundational standards from the middle grades.


## 2560 Math Lab 1
## 2560 Math Lab 2

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


## 2560A Applied Mathematics Lab 1
## 2560A Applied Mathematics Lab 2

Applied Mathematics Lab provides students with individualized instruction designed to increase math related competencies and/or mathematics coursework aligned with Indiana's Academic Standards or Content Connectors for Mathematics.


## 2522 Honors Algebra II-1
## 2522 Honors Algebra II-2

This course, through an accelerated pace, covers all topics in Algebra II and allows time for enrichment of those topics as well as a rigorous, in-depth study of additional concepts. This course will advance student knowledge of theory, development of formulas, and application of concepts. An introduction to limits and trigonometry will be included.

**2522 <u>Algebra II-1</u>**
**2522 <u>Algebra II-2</u>**
This course will include the properties and operations of real numbers. The course will provide for, but not be limited to, student learning in the use and understanding of functions and functional notation, the use of algebraic theorems and algorithms, the use of graphing and other methods of solving open sentences of higher order including the introduction and use of conics, series, exponential functions, the complex number system, and other advanced algebraic concepts.

**2532 <u>Honors Geometry 1</u>**
**2532 <u>Honors Geometry 2</u>**
This course, through an accelerated pace, covers all topics in Geometry and allows time for enrichment of those topics as well as a rigorous, in-depth study of additional concepts. This course will stress the uses of deductive reasoning and inductive reasoning in drawing conclusions. It will also deal with fundamental geometric figures and the properties and relationships involving these figures: angles, lines, and planes; congruent triangles; similar triangles; polygons; circles; areas of polygons and circles; areas and volumes of geometric solids; and coordinate geometry. In addition, this course will include formal proof structures and the use of logic in developing these proofs.

**2532 <u>Geometry 1</u>**
**2532 <u>Geometry 2</u>**
This course will stress the uses of deductive reasoning and inductive reasoning in drawing conclusions. It will also deal with fundamental geometric figures and the properties and relationships involving these figures: angles, lines, and planes; congruent triangles; similar triangles; polygons; circles; areas of polygons and circles; areas and volumes of geometric solids; and coordinate geometry. In addition, this course will include formal proof structures and the use of logic in developing these proofs.

**2532A <u>Applied Geometry 1</u>**
**2532A <u>Applied Geometry 2</u>**
Applied Geometry formalizes and extends students' geometric experiences from the middle grades. These critical areas comprise the Geometry course: Points, Lines, Angles, and Planes; Triangles; Quadrilaterals and Other Polygons; Circles; Transformations; and Three- dimensional Solids. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**2595 <u>PRIME Math 1</u>**
**2595 <u>PRIME Math 2</u>**
The PRIME Math course includes and reinforces the Algebra I, Geometry, Algebra II, and Statistics skills necessary for postsecondary success. This course emphasizes understanding of math concepts rather than just memorizing procedures. PRIME math emphasizes students' reasoning and sense making about procedures (e.g., why to use a certain formula or method to solve a problem). This equips them with higher-order thinking skills in order to apply math skills, functions, and concepts in different situations. The course is intended for students who currently have achieved the minimum math requirements at the secondary level, but need additional experiences to enhance their mathematical knowledge before pursuing credit-bearing courses at a postsecondary institution.

**2546 <u>Probability and Statistics</u>**
Probability and Statistics includes the concepts and skills needed to apply statistical techniques in the decision-making process. Probability and Statistics are made up of three strands: Data Analysis; Experimental Design; and Probability. Practical examples based on real experimental data are used throughout. Students plan and conduct experiments or surveys and analyze the resulting data. The use of graphing technology and computer programs is encouraged. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**2530 <u>Finite Mathematics/MATH 135 Ivy Tech</u>**
This course is an umbrella of mathematical topics, designed for students who will undertake higher-level mathematics in college which may not include calculus. The unifying topics of the course should be counting, matrices, and recursion. Additional topics may include graph theory, social choice, line programming, game theory, logic, coding theory, queuing theory, set theory, growth patterns, and mathematical induction or further study of probability and statistics. Technologies such as the graphing calculator and computers should be frequently used tools in this course.

**2564 <u>Pre-Calculus/MATH 136 Ivy Tech</u>**
**2566 <u>Trigonometry/MATH 137 Ivy Tech</u>**
This course, through an accelerated pace, covers all of the topics in Pre-Calculus/Trigonometry 1& 2, and allows time for a rigorous in-depth study of additional concepts. A functional approach will provide for the integration of trigonometric concepts, relationships of equations and graphs, and applications to real world problems. The use of appropriate technology will be essential as students refine their ability to solve and interpret equations and

also as they broaden their understanding of functions and their graphs. Students will further develop an appreciation of the contributions made by mathematicians such as De Moivre and Euler. Topics include relations and functions, logarithmic and exponential functions, trigonometry in triangles, trigonometric functions, trigonometric identities and equations, polar coordinates and complex numbers, sequences, series, and data analysis. Students in this course will use a TI-84 Silver + calculator. The course objectives and competencies will include those for trigonometry.

## 2564 Pre-Calculus/MATH 111 Ball State
## 2566 Trigonometry/MATH 112 Ball State

This course, through an accelerated pace, covers all of the topics in Pre-Calculus/Trigonometry 1& 2 and allows time for a rigorous in-depth study of additional concepts. A functional approach will provide for the integration of trigonometric concepts, relationships of equations and graphs, and applications to real-world problems. The use of appropriate technology will be essential as students refine their ability to solve and interpret equations and also as they broaden their understanding of functions and their graphs. Students will further develop an appreciation of the contributions made by mathematicians such as De Moivre and Euler. Topics include relations and functions, logarithmic and exponential functions, trigonometry in triangles, trigonometric functions, trigonometric identities and equations, polar coordinates and complex numbers, sequences, series, and data analysis. Students in this course will use a TI-84 Silver + calculator. The course objectives and competencies will include those for trigonometry.

## 2570 AP Statistics 1
## 2570 AP Statistics 2

AP Statistics is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding.

## 2527 Calculus 1 AB/ MATH 211 Ivy Tech
## 2527 Calculus 2 AB/ MATH 211 Ivy Tech
## 2562 AP Calculus 1 AB
## 2562 AP Calculus 2 AB

Calculus Advanced Placement is a course that provides students with the content established by the College Board.

Students will explore topics that include limits, continuity, derivatives, definite integrals, and techniques of integration involving rational, trigonometric, logarithmic, and exponential functions. The course should also include applications of the derivative, the integral, and theory of calculus. Students will use graphing calculators. Students will be expected to take the AP Exam upon completion of this course.

**2572 <u>AP Calculus 1 BC</u>**
**2572 <u>AP Calculus 2 BC</u>**
This course will provide students with the content which has been established by the College Board. Generally, topics will include limits, continuity, derivatives, definite integrals, and techniques of integration involving rational, trigonometric, logarithmic, and exponential functions. The course should also include applications of the derivative, the integral, and theory of calculus. Students will be expected to take the AP Exam upon completion of this course and will be primarily concerned with an intuitive understanding of the concepts of calculus and experience with its methods and applications. Students will use graphing calculators.

**4570 <u>AP Computer Science A 1</u>**
**4570 <u>AP Computer Science A 2</u>**
AP Computer Science A is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. AP Computer Science A is equivalent to a first-semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The curriculum for AP Computer Science A is compatible with many CSI courses in colleges and universities.

**4568 <u>AP Computer Science Principles 1</u>**
**4568 <u>AP Computer Science Principles 2</u>**
The AP Computer Science Principles course will introduce you to the essential ideas of computer science and show how computing and technology can influence the world around you. Students will creatively address real-world issues and concerns while using the same processes and tools as artists, writers, computer scientists, and engineers to bring ideas to life. The course is not intended to be used as a dual credit course.

**2550 <u>Quantitative Reasoning 1/Math 125 Ball State</u>**
**2550 <u>Quantitative Reasoning 2/Math 125 Ball State</u>**
Quantitative Reasoning is a mathematics course focused on the study of numeracy, ratio, and proportional reasoning, modeling, probabilistic reasoning to assess risk, and statistics. Students build knowledge of and confidence with basic mathematical/analytical concepts and operations required for problem-solving, decision-making, and economic productivity. Technology, such as computers and graphing calculators, should be used frequently. This higher-level mathematics course is designed to align with college-level quantitative reasoning courses for dual secondary/college credit. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**2550 <u>Quantitative Reasoning/Math 123 Ivy Tech</u>**
Quantitative Reasoning is a mathematics course focused on the study of numeracy, ratio, and proportional reasoning, modeling, probabilistic reasoning to assess risk, and statistics. Students build knowledge of and confidence with basic mathematical/analytical concepts and operations required for problem-solving, decision-making, and economic productivity. Technology, such as computers and graphing calculators, should be used frequently. This higher-level mathematics course is designed to align with college-level quantitative reasoning courses for dual secondary/college credit. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**2554 <u>Integrated Mathematics I – Int Math I</u>**
Integrated Mathematics I formalizes and extends the mathematics students learned in the middle grades. The critical areas deepen and extend understanding of linear relationships, in part by contrasting them with exponential phenomena, and in part by applying linear models to data that exhibit a linear trend. Integrated Mathematics I uses properties and theorems involving congruent figures to deepen and extend understanding of geometric knowledge from prior grades. The final unit in the course ties together the algebraic and geometric ideas studied. The eight Process Standards for Mathematics apply throughout the course. Together with the content standards, the Process Standards prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

### 2556  Integrated Mathematics II – Int Math II

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

### 2558  Integrated Mathematics III – Int Math III

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

# MULTI-DISCIPLINARY

### 0500 Basic Skills Development

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

**0500A <u>Applied Basic Skills Development</u>**

Applied Basic Skills Development is a multidisciplinary course that provides students continuing opportunities to develop basic skills including: (1) reading, (2) writing, (3) listening, (4) speaking, (5) mathematical computation, (6) note taking, (7) study and organizational skills, and (8) problem-solving skills, (9) employability skills, which are essential for high school achievement and post-secondary outcomes. Determination of the skills to be emphasized in this course is based on Indiana's standards and Content Connectors, individual school corporation general curriculum plans, and the student's Individualized Education Programs (IEP) or other individualized plans.

**0509 <u>Jobs for America's Graduates 1</u>**
**0509 <u>Jobs for America's Graduates 2</u>**

Jobs for America's Graduates (JAG) is a state-based, national non-profit organization dedicated to preventing dropouts among most at-risk young people. JAG's mission is to keep young people in school through graduation and provide work-based learning experiences that will lead to career advancement opportunities or to enroll in a postsecondary institution that leads to a rewarding career. JAG students receive adult mentoring while in school and one year of follow-up counseling after graduation. Résumé development experience, career-related testing, and job placement assistance are provided to students.

**0522 <u>Career Information and Exploration 1</u>**
**0522 <u>Career Information and Exploration 2</u>**

Career Information and Exploration provides students with opportunities to learn about themselves and about various traditional and nontraditional occupations and careers. Students also gain an awareness of the type of occupational preparation or training needed for various occupations and careers. Students develop skills in: (1) employability, (2) understanding the economic process, and (3) career decision making and planning. Opportunities are provided for students to observe and participate in various job situations through opportunities such as field trips, internships, mock interviews, and guest speakers. Resume development experience and career-related testing are also provided to students.

**0522A <u>Applied Career Information and Exploration 1</u>**
**0522A <u>Applied Career Information and Exploration 2</u>**

Applied Career Information and Exploration provides students with opportunities to learn about themselves including interests, strengths and needed supports while exploring various traditional and nontraditional occupations and careers. Students develop skills in: (1) employability, (2) understanding the economic process, and (3) career decision-making and planning. Opportunities are provided for students to observe and participate in various job situations through opportunities such as community-based

instruction, internships, mock interviews, and guest speakers. Portfolio and resume development experience and career-related assessments may also be provided to students. Based instruction, internships, mock interviews, and guest speakers. Portfolio and resume development experience and career-related assessments may also be provided to students.

**0035 <u>Student Assignment 1</u>**
**0035 <u>Student Assignment 2</u>**
This course is designed as a program to give opportunities to students to gain insight into school assignments and related tasks. Each student will be assigned by the school principal or designee to certified personnel who will be responsible for the activities of the assignment.

## MCJROTC/ASPE
## (Marine Corps Junior Reserve Officer Training Corps/
## Alternative Supervised Physical Education)

Students may earn 1 of their required PE credits by completing 1 year of MCJROTC with a passing grade.

- The ASPE credit for MCJROTC will only count as a PE credit and does not count as an elective credit for MCJROTC. Students cannot earn the PE credit for being enrolled in a single MCJROTC course.
- Students will meet the remaining PE requirement by taking a semester of PE.

**0516 <u>MCJROTC Leadership Training I-1</u>**
**0516 <u>MCJROTC Leadership Training I-2</u>**
This is an introductory course presenting basic knowledge to prepare a cadet for Leadership Education and Training courses to follow. Major emphasis is placed on leadership, citizenship, techniques of communications, customs and courtesies, drill and ceremonies, first aid, map reading, wearing of the uniform, and the cadet challenge physical fitness program. Second semester enrollment requires instructor approval.

**0516 <u>MCJROTC Leadership Training II-1</u>**
**0516 <u>MCJROTC Leadership Training II-2</u>**
This is a second-year course that builds on the basic knowledge gained in the introductory courses. This involves a more in-depth study of the introductory course subjects. Leadership positions in the cadet organization are assigned. Instructor approval is required for enrollment.

**0516 MCJROTC Leadership Training III-1**
**0516 MCJROTC Leadership Training III-2**

This is a third-year course that builds on the intermediate knowledge gained in MCJROTC I and II. Focus on citizenship development continues as well as instruction in planning and coordinating activities. Leadership and staff positions in the cadet battalion are assigned. Instructor approval is required for enrollment.

**0516 MCJROTC Leadership Training IV-1**
**0516 MCJROTC Leadership Training IV-2**

This is a fourth-year course that continues the work for MCJROTC III. Focus is on the development of planning, coordinating, and implementing activities. Leadership and staff positions in the cadet battalion are assigned. Instructor approval is required for enrollment.

**0516 MJROTC Staff 1**
**0516 MJROTC Staff 2**

This course focuses on teamwork and contributing to the planning of events that our program participates in both at the school and in our community. Cadets will be instructed on the steps of BAMCIS (Begin the Planning, Arrange for Reconnaissance, Make Reconnaissance, Complete the Planning, Issuing the Orders, and Supervising the Event). Cadets will also be instructed on and utilizing the Five Paragraph Order of SMEAC for reacting to situations (Situation, Mission, Execution, Administration, and Command). This course is for LE III and LE IV cadets who have shown outstanding skills thus far in their time in the MCJROTC program. An LE II can be enrolled if started by the instructor.

**0520 Peer Tutoring 1**
**0520 Peer Tutoring 2**

Peer Tutoring provides high school students with an organized exploratory experience to assist students in kindergarten through grade twelve (K-12), through a helping relationship, with their studies and personal growth and development. The course provides opportunities for the students taking the course to develop a basic understanding of individual differences and to explore career options in related fields. Peer Tutoring experiences are preplanned by the teacher trainer and any cooperating teacher under whom the tutoring is to be provided. It must be conducted under the supervision of a licensed teacher. The course provides a balance of class work relating to the development of and use of: listening skills, communication skills, facilitation skills, decision-making skills, and teaching strategies.

### 0524 Community Service

Community Service is a course created by public law IC § 20-30-14. Community service allows students in grades nine through twelve (HEA 1629) the opportunity to earn up to two high school credits for completion of approved community service projects or volunteer service that "relates to a course in which the student is enrolled or intends to enroll." For each student who wishes to earn credit for community service or volunteer service under this law, the student, a teacher of the student, or a community or volunteer service organization must submit an application to the high school principal including: 1) name of the community service organization or volunteer service organization the student intends to assist; 2) name, address, and telephone number of the director or supervisor of the community service organization or volunteer service organization and, if different from the director or supervisor, the name, address, and telephone number of the individual assigned by the community or volunteer service organization to supervise the student at the activity site; 3) nature of the community service or volunteer service performed by the student with a certification that the service performed by the student is voluntary; 4) total number of hours the student intends to serve the community service organization or volunteer service organization during the school year; 5) written statement by the director or the supervisor of the community service organization or volunteer service organization certifying that the information included in the application is an accurate reflection of: (a) the student's expectations with regard to the number of hours of service contemplated to be performed; and (b) the community service organization's or the volunteer service organization's need to acquire the student's service; 6) description of: (a) the educational or career exploration benefits the student and the school should expect to gain, including the student learning standards to be achieved, from the student's community or volunteer service participation; and (b) the service and benefit the community service organization or volunteer service organization expects to gain from the student's participation; 7) the description of how the community or volunteer service activity relates to a course in which the student is enrolled or intends to enroll; 8) manner and frequency in which the student and the community or volunteer service activity will be evaluated; 9) the name of the certificated school employee who will be responsible for monitoring and evaluating the student's activity and performance and assigning the student a grade for participation under this section; and 10) any other information required by the principal.

### 0524A Applied Community Service

Applied Community Service is a course created by public law IC 20-30-14. Community service allows students in grades nine through twelve (HEA 1629) the opportunity to earn up to two high school credits for completion of approved community service projects or volunteer service that "relates to a course in which the student is enrolled or intends to enroll."

### 0532 College-Entrance Preparation

College-Entrance Preparation utilizes individual student score reports from the PSAT or other formative assessments to prepare students for college readiness assessments such as Indiana's Graduation Qualifying Exam, the SAT. Based on individual student score reports, students should receive targeted instruction to strengthen their foundations in critical reading, writing, and mathematics. Being "college ready" means being prepared for any post-secondary education or training experience, including readiness for study at two-year and four-year institutions leading to a post-secondary credential (i.e., a certificate, license, Associate's or bachelor's degree). A college-ready student has the necessary English and mathematics skills to qualify for and succeed in entry-level, credit-bearing college courses without the need for remedial coursework.

### 0590 Student Happiness Course

The Indiana Department of Education (IDOE) has designed the Happiness Class for Secondary Students as a resource for social-emotional learning for grades six-twelve. This online class, based on the PERMAP Model of Happiness adapted from Dr. Martin Seligman, will help students develop an awareness of the important of their own personal happiness. Student will learn simple strategies to monitor and regular emotional wellbeing and help manage stress. This class is self-paced, and students will be able to use lessons learned to improve their overall level of happiness.

# PHYSICAL EDUCATION AND HEALTH AND WELLNESS

**MCJROTC/ASPE**
**(Marine Corps Junior Reserve Officer Training Corps/**
**Alternative Supervised Physical Education)**

Students may earn 1 of their required PE credits by completing 1 year of MCJROTC with a passing grade.

- The ASPE credit for MCJROTC will only count as a PE credit and does not count as an elective credit for MCJROTC. Students cannot earn the PE credit for being enrolled in a single MCJROTC course.
- Students will meet the remaining PE requirement by taking a semester of PE.

### 3542 Physical Education I (L)

Physical Education I focuses on instructional strategies through a planned, sequential, and comprehensive physical education curriculum which provides students with opportunities to actively participate in at least four of the following: team sports; dual sport activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance, all of which are within the framework of the skills, knowledge and confidence needed by the student for a lifetime of healthful physical activity and fitness.

### 3542A Applied Physical Education I (L)

Applied Physical Education I focuses on instructional strategies through a planned, sequential, and comprehensive physical education curriculum which provides students with opportunities to actively participate in at least four of the following: team sports; dual sport activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance, all which are within the framework of lifetime physical activities and fitness.

### 3544 Physical Education II (L)

This course emphasizes a personal commitment to lifetime activity and fitness for enjoyment, challenge, self-expression, and social interaction. It provides students with opportunities to achieve and maintain a health-enhancing level of physical fitness and increases their knowledge of fitness concepts. This course includes at least three different movement forms without repeating those offered in Physical Education I. Movement forms may include health-related fitness activities (cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition), aerobic exercise, team sports, individual and dual sports, gymnastics, outdoor pursuits, self-defense, aquatics, dance, and recreational games

### 3544A Applied Physical Education II (L)

Applied Physical Education II focuses on instructional strategies through a planned, sequential, and comprehensive physical education curriculum which provides students with opportunities to actively participate in four of the following areas that were not covered in Physical Education I: team sports; dual sport activities; individual physical activities; outdoor pursuits; self-defense and martial arts; aquatics; gymnastics; and dance, all which are within the framework of lifetime physical activities and fitness.

### 3506 Health & Wellness Education

This is a required course designed to further acquaint each person with a better understanding of oneself and the environment. Included are units of study on body systems and their functions, diseases, mental health, personal hygiene, nutrition, chemical abuse, community health, first aid, and safety.

Resource persons from the community and various health agencies contribute to the instructional program.

**3506A** <u>**Applied Health & Wellness Education**</u>
Applied Health & Wellness provides the basis to help students adopt and maintain healthy behaviors. Health education should contribute directly to a student's ability to successfully practice behaviors that protect and promote health and avoid or reduce health risks. Through a variety of instructional strategies, students practice the development of functional health information (essential concepts); determine personal values that support health behaviors; develop group norms that value a healthy lifestyle; develop the essential skills necessary to adopt, practice, and maintain health-enhancing behaviors. Priority areas include: promoting personal health and wellness, physical activity, and healthy eating; promoting safety and preventing unintentional injury and violence; promoting mental and emotional health, a tobacco- free lifestyle, and an alcohol- and other drug-free lifestyle; and promoting human development and family health.

**3560** <u>**Elective Physical Education/Leisure Sports (L)**</u>
Skill development and rules of selected activities from the following: badminton, bowling, Frisbee, golf, handball, pickle ball, running, swimming, table tennis, tennis, and volleyball. Various recreational teams, individual, and dual sports are included.

**3560A** <u>**Applied Elective Physical Education/Leisure Sports (L)**</u>
Applied Elective Physical Education identifies what a student should know and be able to do as a result of a quality physical education program. Elective Physical Education promotes lifetime sport and recreational activities and provides an opportunity for an in-depth study in one or more specific areas. This course includes the study of physical development concepts and principles of sport and exercise as well as opportunities to develop or refine skills and attitudes that promote lifelong fitness.

**3560** <u>**Elective Physical Education/Physical Conditioning 1 (L)**</u>
**3560** <u>**Elective Physical Education/Physical Conditioning 2 (L)**</u>
This course includes beginning instruction in the development of one's physical capabilities, introduction to the use of the Universal Machine, and basic techniques of free weight lifts. Information is discussed as to physiological reasons for muscle growth, and the adverse effects of drugs involved in muscle gain are studied. A basic weight lifting program is set up for each individual according to his/her ability and is incorporated along with aerobic activities to develop cardiovascular fitness. Testing is done periodically to assess levels of growth.

# SCIENCE

**BIOLOGICAL SCIENCE COURSES**

**3024 <u>Honors Biology I-1 (L)</u>**
**3024 <u>Honors Biology I-2 (L)</u>**
    Students must qualify for the Honors Program to enroll in this class. This course will provide students with expanded opportunities to perform laboratory, literature, and field investigations focused on cell biology, genetics, evolution, and ecology. Laboratory experience will comprise 50% of the course, and each student will complete a long-term inquiry project. Students should be able to: Recognize the relationship of biochemistry, photosynthesis, respiration, and cell reproduction to the function of the cell. Demonstrate an understanding of Mendelian inheritance, DNA structure and function, and perform basic DNA analysis. Objectively examine the basic theories of evolution. Assess the various components of the environment and establish an opinion on current environmental issues.

**3024 <u>Biology I-1 (L)</u>**
**3024 <u>Biology I-2 (L)</u>**
    Biology I is a course based on the following core topics: cellular structure and function, matter cycles and energy transfer, interdependence, inheritance and variation in traits, and evolution. Instruction should focus on developing student understanding that scientific knowledge is gained from observation of natural phenomena and experimentation, by designing and conducting investigations guided by theory, and by evaluating and communicating the results of those investigations according to accepted procedures.

**3024A <u>Applied Biology I-1</u>**
**3024A <u>Applied Biology I-2</u>**
    Applied Biology I is a course based on the following core topics: cellular chemistry, structure and reproduction; matter cycles and energy transfer; interdependence of organisms; molecular basis of heredity; genetics and evolution. Instruction should focus on developing student understanding that scientific knowledge is gained from observation of natural phenomena and experimentation, by designing and conducting investigations guided by theory, and by evaluating and communicating the results of those investigations according to accepted procedures.

**3030 <u>Life Science (L)</u>**
    Life science will provide a basic biology course designed to provide students with opportunities to perform laboratory and field investigations of those biological concepts and principles that affect their well-being, as well as that of their community and other living organisms in their environment. The course

will develop those problem-solving skills and strategies that students will need to be effective citizens, consumers, and workers in a scientific and technological society.

### 3030A Applied Life Science (L)

Applied Life Science is an introduction to biology course. Students develop problem-solving skills and strategies while performing laboratory and field investigations of fundamental biological concepts and principles. Students explore the functions and processes of cells within all living organisms, general concepts of genetics, and the relationships of living organisms to each other and to the environment as a whole.

### 3026 Biology II 1 (L)/BIO 101 Ivy Tech
### 3026 Biology II 2 (L)/BIO 101 Ivy Tech

This course provides students with extended opportunities to pursue laboratory (25% of the classroom experience), field, and literature investigations into the internal structures, functions, and processes of living organisms and the environmental interactions of these organisms.

### 3020 AP Biology 1 (L)/BIO 105 IVY TECH
### 3020 AP Biology 2 (L)/BIO 105 IVY TECH

This course follows College Board entrance examination guidelines for advanced placement biology. This course will provide students with the opportunities to pursue laboratory, field and literature investigations into the internal structures, functions and processes of living organisms and the environmental interactions of these organisms. Coverage of the three general areas: molecules and cells; genetics and evolution; and organisms and populations will stress basic facts and the synthesis of these facts into major concepts and themes. This course is for students preparing for the AP Exam in biology.

### 3026 Biology II-1
### 3026 Biology II-2

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.

**3092 Botany 1 (L)**
**3092 Botany 2 (L)**
This course will provide students with opportunities to perform laboratory, literature, and field investigation of various species of plants, the systems and subsystems of plants, their interactions with other organisms and their environments, as well as to study the similarities to and differences from organisms in other biological kingdoms. Students will be expected to study the internal structures, functions, and processes of various species of plants, as well as the ways these species interact with the environment. The course will involve students in more specialized hands-on investigations of the taxonomy, morphology, and/or history of plants, and refine the students' ability to conduct scientific inquiry/methodology.

**3092 Genetics (L)**
In this course students will utilize a laboratory setting (25% of class experience) to examine human inheritance and molecular genetics. As part of the investigative nature of this course, students will:
● Recognize modes of transmission and detail the biochemical pathways of genetic diseases.
● Examine the genetic blueprint and perform DNA analysis.
● Recognize the impact of the environment on the human genome.
● Distinguish between different types of gene technology and perform selected experiments to demonstrate the process.
● Analyze current trends and technology in the field of genetics and evaluate the bioethics of these societal issues.

**3092 Human Physiology (L)**
This course focuses on the functional mechanisms of the human body in maintaining homeostasis. Complementarity of structure and function is stressed and the interrelationships of body organ systems are addressed. Laboratory investigations (25% of class experience) include analysis of specific body functions using lab equipment and computer software. Students should be able to:
● Relate structure to the function of each system of the human body.
● Demonstrate a comprehensive understanding of each system of the human body.
● Recognize the importance of homeostasis in maintaining the human body.
● Analyze data and predict outcomes of selected body functions.

**3092 Zoology 1 (L)**
**3092 Zoology 2 (L)**
This course will provide for investigations of the various phyla of animals, their systems and subsystems, their interactions with other organisms and their environment, and their biological kingdoms. The course will provide laboratory investigation (comprising 25% of the class experience) of preserved

specimens for the study of animal taxonomy, morphology, and/or histology. When living or preserved specimens are not available, media records of the animal structures, behaviors, and ecological functions will be utilized. The course will involve students in more specialized hands-on investigations of the taxonomy, morphology, and/or history of animal taxonomy and refine the student's ability to conduct scientific inquiry/methodology. Students will be expected to apply biological concepts and principles to specific environmental and health issues.

## EARTH/SPACE SCIENCE COURSES

**3044 <u>Earth and Space Science I-1 (L)</u>**
**3044 <u>Earth and Space Science I-2 (L)</u>**
This course should provide a study of the Earth's lithosphere, atmosphere, and hydrosphere, and celestial environment. Laboratory investigations will comprise 25% of the class experience and emphasize the study of the energy at work in forming and modifying earth materials, landforms, and continents through geological time. Students should have opportunities to gain an understanding of the history of the development of the earth/space sciences, to explore the uses of knowledge of the earth and its environment in various careers, and to cope with problems related to personal needs and social issues.
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**3044A <u>Applied Earth and Space Science I-1 (L)</u>**
**3044A <u>Applied Earth and Space Science I-2 (L)</u>**
Applied Earth and Space Science I is a course focused on the following core topics: study of the earth's layers; atmosphere and hydrosphere; structure and scale of the universe; the solar system and earth processes. Students analyze and describe earth's interconnected systems and examine how earth's materials, landforms, and continents are modified across geological time. Instruction should focus on developing student understanding that scientific knowledge is gained from observation and experimentation, by conducting investigations and evaluating and communicating the results of those investigations. This course may include a variety of learning experiences and tools to support the process of investigation, data collection, and analysis.

**3092 <u>Astronomy (L)</u>**
This course is a study of the universe— its composition, structure, apparent motions, and characteristics. This course will investigate how man's understanding of the universe is changing. Techniques of measurement in astronomy will be included in laboratory investigations, which comprise 25% of the classroom experience.

## PHYSICAL SCIENCE COURSES

**3102 <u>Physical Science</u>**

Physical Science is a course in which students develop problem-solving skills and strategies while performing laboratory and field investigations of fundamental chemical, physical, and related earth and space science concepts and principles that are related to students' interests and that address everyday problems. Students enrolled in Physical Science will explore the structure and properties of matter, the nature of energy and its role in chemical reactions, and the physical and chemical laws that govern Earth's interconnected systems and forces of nature.

**3102A <u>Applied Physical Science</u>**

Applied Physical Science is a course in which students develop problem-solving skills and strategies while performing laboratory and field investigations of fundamental chemical, physical, and related earth and space science concepts and principles that are related to students' interests and that address everyday problems.

**3064 <u>Chemistry I-1 (L)/ CHEM 101 Ivy Tech</u>**
**3064 <u>Chemistry I-2 (L)/ CHEM 101 Ivy Tech</u>**

Students must qualify for the Honors Program to enroll in this class. This course will provide students with expanded opportunities to perform laboratory, literature, and field investigations focused on the study of the structure of matter and the mechanisms of interactions of matter and chemical reactions. Laboratory experience will comprise 50% of the course, and a long-term inquiry project will utilize information from investigations students are making. Students will have opportunities to prepare laboratory solutions of known concentration, titrate to find unknown concentrations, and calculate pH, pOH, kw, ka, kb, molarity, molality, moles, grams, volume, and number of particles. After the course, students should be able to calculate models of physical quantities, perform lab investigations independently, write formal lab reports, perform extended research, document sources, solve problems individually and in groups, and be able to explain and relate chemistry concepts to activities, individuals, and situations outside the classroom.

**3064 <u>Chemistry I-1 (L)</u>**
**3064 <u>Chemistry I-2 (L)</u>**

With an environmental emphasis and an emphasis on practical daily usage, this course will allow students to synthesize useful models of the structure of matter and the mechanisms of its interactions through laboratory investigations (25% of class work) of matter and its chemical reactions. This course is organized around the concepts of atomic structure, bonding, the quantitative study of chemical reactions and other changes that accompany chemical reactions.

Students should have the opportunity to gain an understanding of the history of chemistry, to explore the uses of chemistry in various careers, to cope with chemical questions and problems related to personal needs and social issues, and to learn and practice laboratory safety.

### 3060 AP Chemistry I-1 (L)
### 3060 AP Chemistry I-2 (L)

Advanced Placement Chemistry is for students preparing for the AP Exam in chemistry. This course follows College Board entrance examination guidelines for advanced placement chemistry. The emphasis of instruction will be on the development of a comprehensive understanding and preparation in chemistry concepts using mathematical formulations, chemical calculations, and extended laboratory work. Two semesters, one credit per semester, 11-12th grades, counts as an elective for all diplomas and as a Quantitative Reasoning course.

### 3066 Chemistry II-1 (L)
### 3066 Chemistry II-2 (L)

This course will provide for extended laboratory (at least 25% of the classroom experience), and literature investigations of chemical reactions of matter in living and non-living materials. The course will stress the unifying themes of chemistry, the development of useful physical and mathematical models of matter and its interactions, and the methods of scientific inquiry.

### 3084 Physics I-1 (L)
### 3084 Physics I-2 (L)

This course will aid students in synthesizing concepts of matter and energy through the laboratory study of mechanics, wave motion, heat, light, electricity, magnetism, electromagnetism, and atomic and nuclear physics. Labs will comprise at least 25% of class work. Students will have opportunities to acquire an awareness of the history of physics and its role in the development of scientific theories and laws. Students will also have opportunities to become better able to cope with physics questions and problems related to personal needs, social issues, and various careers.

### 3080 AP Physics I-1: Algebra-based (L)
### 3080 AP Physics I-2: Algebra-based (L)

Advanced Placement Physics I is for students preparing for the AP Exam in AP Physics I. This course follows College Board entrance examination guidelines for AP Physics I. This course is equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics; work, energy, and power; and mechanical waves and sound. It also introduces electrical circuits.

**3081 <u>AP Physics II-1: Algebra-based (L)</u>**
**3081 <u>AP Physics II-2: Algebra-based (L)</u>**
Advanced Placement Physics II is for students preparing for the AP Exam in AP Physics II. This course follows College Board entrance examination guidelines for AP Physics II. This course is equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics, thermodynamics, electricity and magnetism, optics, and atomic and nuclear physics.

## INTEGRATED SCIENCE COURSES

**3010 <u>Environmental Science 1 (L)</u>**
**3010 <u>Environmental Science 2 (L)</u>**
This course will deal with the environmental issues of water ecology, air and water pollution, energy management, wildlife management, solid waste management, recycling and the environmental impact of pollution and other human activities on natural ecosystems. Students will formulate, design and carry out laboratory and field investigations as an essential course component.

**3108 <u>Integrated Chemistry-Physics 1 (L)</u>**
**3108 <u>Integrated Chemistry-Physics 2 (L)</u>**
This course will introduce the fundamental concepts of scientific inquiry, the structure of matter, chemical reactions, forces, motion, and the interactions between energy and matter. The course will serve students as a laboratory-based (at least 25% of class work) introduction to possible future coursework in chemistry or physics while ensuring mastery of the basics of each discipline. The ultimate goal of the course is to produce scientifically literate citizens capable of using their knowledge of physical science to solve real-world problems and to make personal, social, and ethical decisions that have consequences beyond the classroom walls. It is not open to students who have completed regular chemistry and/or physics.

**3012 <u>AP Environmental Science 1</u>**
**3012 <u>AP Environmental Science 2</u>**
AP Environmental Science is a course based on content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. Students enrolled in AP Environmental Science investigate the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them.

# SOCIAL STUDIES

**1570 <u>Geography and History of the World 1</u>**
**1570 <u>Geography and History of the World 2</u>**
**1570 <u>H Geography/ and History of the World 1</u>**
**1570 <u>H Geography/ and History of the World 2</u>**
   This course is designed to enable students to use geographical skills and historical concepts to deepen their understanding of major global themes including the origin and spread of world religions, exploration, conquest, imperialism, urbanization, innovations, and revolutions.

**1570A <u>Applied Geography and History of the World 1</u>**
**1570A <u>Applied Geography and History of the World 2</u>**
   Applied Geography and History of the World is designed to enable students to use geographical tools, skills and historical concepts to apply their understanding of major global themes including the origin and spread of world religions, exploration, conquest, imperialism, urbanization, innovations, and revolutions. Geographical and historical skills include forming research questions, acquiring information by investigating a variety sources, organizing information by creating graphic representations, analyzing information to understand, determine and explain patterns and trends, planning for the future, and documenting and presenting findings orally or in writing. Students use the knowledge, tools, and skills obtained from this course in order to understand, analyze, evaluate, and make predictions about major global developments. This course is designed to nurture perceptive and responsible citizenship, to encourage and support the development of critical thinking skills and lifelong learning, and to help prepare Indiana students for the 21st Century.

**1548 <u>World History and Civilization 1</u>**
**1548 <u>World History and Civilization 2</u>**
   This course emphasizes events and developments in the past that greatly affected large numbers of people across broad areas and that significantly influenced people and places in subsequent eras. Key events related to people and places as well as transcultural interaction and exchanges are examined in this course.

**1612 <u>AP World History Modern 1</u>**
**1612 <u>AP World History Modern 2</u>**
   AP World History is a course based on the content established and copyrighted by the College Board.  The course is not intended to be used as a dual credit course.  AP World History focuses on developing students' abilities to think conceptually about world history from approximately 8000 BCE to the

present and apply historical thinking skills as they learn about the past. Five themes of equal importance – focusing on the environment, cultures, state-building, economic systems, and social structures – provide areas of historical inquiry for investigation throughout the course. AP World History encompasses the history of the five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania, with a special focus on historical developments and processes that cross multiple regions.

**1542 <u>U.S. History 1</u>**
**1542 <u>U.S. History 2</u>**
**1542 <u>U.S. History 1/ HIST 101 Ivy Tech</u>**
**1542 <u>U.S. History 2/ HIST 102 Ivy Tech</u>**
United States History is a two-semester course that builds upon concepts developed in previous studies of U.S. History and emphasizes national development from the late nineteenth century into the twenty-first century. After reviewing fundamental themes in the early development of the nation, students are expected to identify and review significant events, persons, and movements in the early development of the nation. The course then gives major emphasis to the interaction of key events, people, and political, economic, social, and cultural influences in national developments from the late nineteenth century through the present as they relate to life in Indiana and the United States. Students are expected to trace and analyze chronological periods and examine the significant themes and concepts in U.S. History. Students develop historical thinking and research skills and use primary and secondary sources to explore topical issues and to understand the cause for changes in the nation over time.

**1542A <u>Applied United States History 1</u>**
**1542A <u>Applied United States History 2</u>**
Applied United States History is a course that builds upon concepts of U.S. History and emphasizes national development from the late nineteenth century into the twenty-first century. After reviewing fundamental themes in the early development of the nation, students identify and review significant events, persons, and movements in the early development of the nation. The course then gives major emphasis to the interaction of key events, people, and political, economic, social, and cultural influences in national developments from the late nineteenth century through the present as they relate to life in Indiana and the United States. Students trace and analyze chronological periods and examine the significant themes and concepts in U.S. History. Students develop historical thinking and research skills and use primary and secondary sources to explore topical issues and to understand specific topics or the cause for changes in the nation over time.

**1562 <u>AP U.S. History 1</u>**
**1562 <u>AP U.S. History 2</u>**
*AP United States History* is a course based on the content established and copyrighted by the College Board. The course is not intended to be used as a dual credit course. AP United States History focuses on developing students' abilities to think conceptually about U.S. history from approximately 1491 to the present and apply historical thinking skills as they learn about the past. Seven themes of equal importance — identity; peopling; politics and power; work, exchange, and technology; America in the world; environment and geography; and ideas, beliefs, and culture — provide areas of historical inquiry for investigation throughout the course. These require students to reason historically about continuity and change over time and make comparisons among various historical developments in different times and places. Students will be expected to take the AP exam upon completion of the course. Two semesters, two credits, 11-12<sup>th</sup> grades. Fulfills the U.S. History requirement for all diplomas.

**1540 <u>U.S. Government</u>**
**1540 <u>Government/POLS 101 Ivy Tech</u>**
United States Government provides a framework for understanding the purposes, principles, and practices of constitutional representative democracy in the United States. Responsible and effective participation of citizens is stressed. Students understand the nature of citizenship, politics, and governments and understand the rights and responsibilities of citizens and how these are part of local, state, and national government. Students examine how the United States Constitution protects the rights and provides the structure and functions of various levels of government. Analysis of how the United States interacts with other nations and the government's role in world affairs is included in this course. Using primary and secondary resources, students will articulate, evaluate, and defend positions on political issues.

**1540A <u>Applied United States Government</u>**
Applied United States Government provides a framework for understanding the purposes, principles, and practices of constitutional representative democracy in the United States. Responsible and effective participation of citizens is stressed. Students understand the nature of citizenship, politics, and governments; the rights and responsibilities of citizens; and how these are part of local, state, and national government. Students examine how the United States Constitution protects rights and provides the structure and functions of various levels of government. How the United States interacts with other nations and the government's role in world affairs will be included. Using primary and secondary resources, students will articulate, evaluate, and defend positions on political issues. As a result, they will recognize their impact, the role of individuals and groups in government, politics, and civic

activities, and the need for civic and political engagement of citizens in the United States.

## 1560 AP United States Government and Politics 1
## 1560 AP United States Government and Politics 2

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

## 1514 Economics

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

## 1514A Applied Economics

Applied Economics examines the allocation of resources and their uses for satisfying human needs and wants. The course identifies economic behaviors of consumers, producers, savers, investors, workers, voters, institutions, governments, and societies in making decisions. Students explain that because resources are limited, people must make choices and understand the role that supply, demand, prices, and profits play in a market economy. Key elements of the course include the study of scarcity and economic reasoning; supply and demand; market structures; the role of government; national economic performance; the role of financial institutions; economic stabilization; and trade. Students may be offered opportunities to better understand and apply course content through a variety of instructional strategies including project- and community-based instruction and real world experiences.

**1566 <u>AP Microeconomics 1</u>**
**1564 <u>AP Macroeconomics 2</u>**
   The Advanced Placement Economics course based on the content established and copyrighted by the College Board. This is a course that provides students with a learning experience equivalent to that obtained in a typical college introductory microeconomics or macroeconomics course.
   First Semester – <u>Microeconomics:</u>  This is an introductory college-level course that focuses on the principles of economics that apply to the functions of individual economic decision-makers. The course also develops students' familiarity with the operation of product and factor markets, distributions of income, market failure, and the role of government in promoting greater efficiency and equity in the economy. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts. Topics include: Basic Economic Concepts; Nature and Functions of Product Markets; Factor Markets; and Market Failure and the Role of Government. Students are required to take the AP Exam at the conclusion of the semester.
   Second Semester – <u>Macroeconomics:</u>  This introductory college-level course that focuses on the principles that apply to an economic system as a whole. The course places particular emphasis on the study of national income and price-level determination; it also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts. Topics include: Basic Economic Concepts; Measurement of Economic Performance; National Income and Price Determination; Financial Sector; Stabilization Policies; and Economic Growth. Students are required to take the AP Exam at the conclusion of the semester.

**1538 <u>Modern World Civilization</u>**
   This course provides students with an in-depth look at the twentieth-first-century world. It is a study of different cultures as they exist in the world today, including a comparative analysis of the various kinds of governmental, economic, and social systems. International relationships will be examined partly from the viewpoint of national interests, including the successes or failures of diplomacy.

**1538A <u>Applied Modern World Civilization</u>**
   Applied Modern World Civilization provides students with a look at the twentieth and twenty-first-century world. It is a study of different cultures as they exist in the world today, including a comparative analysis of the various types of government, economic, and social systems. International relationships are examined partly from the viewpoint of national interests, including the successes and failures of diplomacy.

**1532 Psychology**
**1532 Psychology/ PSYCH 101 Ivy Tech**

Psychology is the scientific study of mental processes and behavior. The course is divided into eight content areas: History and Scientific Method, Biological Basis for Behavior, Development, Cognition, Personality and Assessment, Abnormal Psychology, Socio-Cultural Dimensions of Behavior, and Psychological Thinking. History and Scientific Method explores the history of psychology, the research methods used, and the ethical considerations that must be utilized.

Biological Basis for Behavior focuses on the way the brain and nervous system function, including sensation, perception, motivation and emotion. Development analyzes the changes through one's life including the physical, cognitive, emotional, social and moral development. Cognition focuses on learning, memory, information processing, and language development. Personality and Assessment explains at the approaches used to explain one's personality and the assessment tools used. Abnormal Psychology explores psychological disorders and the various treatments used for them. Socio-Cultural Dimensions of Behavior covers topics such as conformity, obedience, perceptions, attitudes and influence of the group on the individual. Psychological Thinking explores how to think like a psychologist and expand critical thinking skills needed in the day-to-day life of a psychologist.

**1558 AP Psychology 1**
**1558 AP Psychology 2**

AP Psychology is a course based on the content established and copyrighted by the College Board. The course introduces students to the systematic and scientific study of human behavior and mental processes. Students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, analyze bias, evaluate claims and evidence, and effectively communicate ideas. Topics include: History and Approaches, Research Methods, Biological Bases of Behavior, Sensation and Perception, States of Consciousness, Learning, Cognition, Motivation and Emotion, Developmental Psychology, Personality, Testing and Individual Differences, Abnormal Behavior, Treatment of Abnormal Behavior, and Social Psychology.

**1516 Ethnic Studies**

Ethnic Studies provides opportunities to broaden students' perspectives concerning lifestyles and cultural patterns of ethnic groups in the United States.  This course will either focus on a particular ethnic group or groups, or

use a comparative approach to the study of patterns of cultural development, immigration, and assimilation, as well as the contributions of specific ethnic or cultural groups.  The course may also include an analysis of the political impact of ethnic diversity in the United States.

## 1518 Indiana Studies

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

## 1518A Applied Indiana Studies

Applied Indiana Studies is an integrated course that compares and contrasts state and national developments in the areas of politics, economics, history, and culture. The course uses Indiana history as a basis for understanding current policies, practices, and state legislative procedures. Examination of individual leaders (state or local) and their roles in a democratic society will be included. Students will examine the participation of citizens in the political process to understand their role. Selections from Indiana arts and literature may also be analyzed for insights into historical events and cultural expressions. Maximum of 2 units, grades 9-12th, counts as an elective or social studies requirement for the Certificate of Completion. Course is offered once per school.

## 1534 Sociology

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

**1538 <u>Topics in History 1</u>**
**1538 <u>Topics in History 2</u>**

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

**1538A <u>Applied Topics in History 1</u>**
**1538A <u>Applied Topics in History 2</u>**

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

**1550 <u>Topics in Social Science</u>**

Topics in Social Science provides students with an opportunity for in-depth study of a specific topic, theme, or concept in one of the social science disciplines such as anthropology, archaeology, economics, geography, political science, psychology, or sociology. It is also possible to focus the course on more than one discipline. A subtitle should be included to give a clear idea of the course content. For example, a course focusing on a specific subject in political science might be entitled, "Topics in Social Science: Comparative Government." Courses taught under this title should emphasize scientific methods of inquiry and help students develop effective research and thinking skills.

# WORLD LANGUAGES

**2080 <u>Latin I-1 & 2</u>**
**2120 <u>Spanish I-1 & 2</u>**
**2060 <u>Japanese I-1 & 2</u>**

Level I students will develop listening, speaking, writing, and reading skills through interesting topics. They are provided opportunities to respond orally to directions and commands, understand and use appropriate forms of address,

ask and answer simple questions, read isolated words and short texts on simple topics, and understand brief written directions. Communication will focus on active, practical usage. Emphasis will be placed on communicative practice through comparison of target language and English, other disciplines, other cultures, and the global community. In Japanese, students will master two alphabets of characters. In Latin, students study the gods and heroes of classical mythology.

**2082 <u>Latin II-1 & 2</u>**
**2122 <u>Spanish II-1 & 2</u>**
**2062 <u>Japanese II-1 & 2</u>**
Level II enables students to participate in classroom activities related to the target language as well as to participate in conversations dealing with daily activities and personal interests. They will respond orally to questions regarding routine activities, participate in conversations, relate a simple experience, understand main ideas and facts from reading, and write briefly on a given topic. This course provides students with opportunities to expand previous cultural knowledge.

**2084 <u>Latin III -1 & 2 / Latin 101 & 102 BSU</u>**
**2124 <u>Spanish III-1 & 2 / SPAN 101 & 102 Ivy Tech</u>**
**2064 <u>Japanese III-1 & 2</u>**
In addition to previously learned communicative skills, Level III students will reinforce and further their knowledge of other disciplines, demonstrate an understanding of cultural differences and show evidence of self-expression in the language. They will read authentic materials and short literary selections and write brief compositions.

**2086 <u>Latin IV-1 & 2 / LAT 201 & 202 BSU</u>**
**2126 <u>Spanish IV – 1 & 2 / SPAN 201 & 202 Ivy Tech</u>**
**2132 <u>AP Spanish IV-1 & 2</u>**
**2066 <u>Japanese IV-1 & 2</u>**
Level IV students will experience the target language by expressing and supporting reactions, judgments, and opinions. They will explore cultural products such as literary/historical selections and fine arts, in addition to practices common to the target language community. They will be able to respond to questions and create original works in both oral and written form in the target language. They will read longer, authentic materials and make judgments about their reading. In Latin, students will gain an understanding of Roman traditions, historical events, and major figures.

**1012 <u>English as a New Language</u>**
English as a New Language, an integrated English course based on the WIDA English Language Development (ELD) Standards, is the study of language, literature, composition and oral communication for English learners

(ELs) 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.

# CAREER & TECHNICAL EDUCATION (CTE) INTRODUCTORY COURSES

### 5239 Exploring Education Professions

Exploring Education Professions is for those students interested in a career or exploring possibilities in education. This course is an introduction to the education field and does not have prerequisites. Exploring Education Professions includes the history of education, an introduction to education professions, qualities and responsibilities of effective teachers, and student evaluation of aptitudes. Effective teachers will include early childhood, elementary, and secondary. A project-based approach that utilizes higher order thinking, communication, leadership, management, and fundamentals to college and career success is recommended. Direct, concrete mathematics and language arts proficiencies will be applied. Service learning, introductory laboratory/field experiences in a variety of education settings, and other authentic applications are strongly recommended. This course provides a foundation for continuing and post-secondary education in all career areas related to children, child development, and nurturing of children.

### 5394 Preparing for College and Careers

Preparing for College and Careers addresses the knowledge, skills, and behaviors all students need to be prepared for success in college, career, and life. 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.

### 5394A Applied Preparing for College and Careers

Applied Preparing for College and Careers addresses the knowledge, skills, and behaviors all students need to be prepared for success in college, career, and life. 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.

## 4540 <u>Personal Financial Responsibility</u>

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

## 4540A <u>Applied Personal Financial Responsibility</u>

Applied 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 and apply skills in financial literacy and responsible decision making. Content includes analyzing personal standards, needs, wants, and goals; identify sources of income, and navigating technology for money management. A project based approach and applications through authentic settings such as work based observations, service learning experiences and community based instruction are appropriate. Direct, concrete applications of basic mathematics proficiencies in projects are encouraged.

# CAREER AND TECHNICAL EDUCATION
# ADVANCED MANUFACTURING, ARCHITECTURE, CONSTRUCTION, AND ENGINEERING TECHNOLOGY

**STEM – Course or programs that incorporate science, technology, engineering and math content and skills within the course curriculum and activities.**

**CAREER CLUSTER:  Advanced Manufacturing**

## 4800 <u>Computers in Design and Production 1</u>
## 4800 <u>Computers in Design and Production 2</u>

Computers in Design and Production is a course that focuses 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. 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.

**4794 Introduction to Design Processes**
This course introduces the student to the design processes used in industry. The student will learn how a product is designed for appearance and function. Students will also learn how structures are designed and constructed. Learning will be achieved through the production of products and construction of models.

**4796 Introduction to Advanced Manufacturing and Logistics 1**
**4796 Introduction to Advanced Manufacturing and Logistics 2**
Introduction to Advanced Manufacturing and Logistics focuses on manufacturing systems with an introduction to advanced manufacturing and logistics and their relationship to society, individuals, and the environment. Students investigate the properties of engineered materials. Students study six major types of material processes: casting and molding; forming; separating; conditioning; finishing; and assembling. After gaining a working knowledge of these materials, students are introduced to advanced manufacturing, logistics, and business principles that are utilized in today's advanced manufacturing industry. Students gain a basic understanding of tooling, electrical skills, operation skills, inventory principles, MSDS's, chart and graph reading and MSSC concepts. There is also an emphasis placed on the flow process principles, material movement, safety, and related business operations. Students have the opportunity to develop the characteristics employers seek as well as skills that will help them in future endeavors.

**4798 Introduction to Transportation 1**
**4798 Introduction to Transportation 2**
Introduction to Transportation is an introductory course designed to help students become familiar with fundamental principles in modes of land, sea, air, and space transportation, including basic mechanical skills and processes involved in the transportation of people, cargo, and goods. Students will gain and apply knowledge and skills in the safe application, design, production, and assessment of products, services, and systems as they relate to the transportation industries. The content of this course includes the study of how transportation impacts individuals, society, and the environment. This course

allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant transportation-related activities, problems, and settings.

## CAREER CLUSTER: Architecture and Construction Courses

### 4792 Introduction to Construction 1
### 4792 Introduction to Construction 2

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

### 5614 Introduction to the Energy Industry

Introduction to the Energy Industry provides students with an understanding of the occupations in the energy industry and the education and training to enter and advance in careers in the field. Students will explore all aspects of the energy industry including nuclear, natural gas and renewable energy. Schools certified through the Center for Energy Workforce Development (CEWD) can offer their students the opportunity to earn the Energy Industry Fundamentals Certificate.

### Project Lead The Way ®Program Courses (STEM)

Project Lead The Way provides students the opportunity to explore, through hands-on experiences, what the field of engineering is all about. Project Lead The Way (PLTW) is a series of courses taken throughout a student's high school career that initially introduces students to the field of engineering, and for those students who find this is the field for them, prepares them to be successful in college engineering programs.

The sequence for PLTW Engineering courses is as follows:

1st Introduction to Engineering & Design 1 & 2
2nd Principles of Engineering 1 & 2
3rd Civil Engineering and Architecture 1 & 2
4th Engineering Design & Development 1 & 2

**4802 Introduction to Engineering & Design 1 (STEM)**
**4802 Introduction to Engineering & Design 2 (STEM)**

Introduction to Engineering Design is a fundamental pre-engineering course where students become familiar with the engineering design process. Students work both individually and in teams to design solutions to a variety of problems using industry standard sketches and current 3D design and modeling software to represent and communicate solutions. Students apply their knowledge through hands-on projects and document their work with the use of an engineering notebook. Students begin with completing structured activities and move to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. MCHS uses the PLTW curriculum to meet the standards for this course.

**5644 Principles of Engineering 1 (STEM)**
**5644 Principles of Engineering 2 (STEM)**

Principles of Engineering is a course that focuses on the process of applying engineering, technological, scientific and mathematical principles in the design, production, and operation of products, structures, and systems. This is a hands-on course designed to provide students interested in engineering careers to explore experiences related to specialized fields such as civil, mechanical, and materials engineering. Students will engage in research, development, planning, design, production, and project management to simulate a career in engineering. Classroom activities are organized to allow students to work in teams and use modern technological processes, computers, CAD software, and production systems in developing and presenting solutions to engineering problems. MCHS uses the PLTW curriculum to meet the standards for this course.

**5650 Civil Engineering and Architecture 1 (STEM)**
**5650 Civil Engineering and Architecture 2 (STEM)**

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 resources, 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. MCHS uses the PLTW curriculum to meet the standards for this course.

**5698 <u>Engineering Design & Development 1 (STEM)</u>**
**5698 <u>Engineering Design & Development 2 (STEM)</u>**
Engineering Design and Development is an engineering research course in which students work in teams to research, design, test, and construct a solution to an open-ended engineering problem. The product development life cycle and a design process are used to guide the team to reach a solution to the problem. The team and/or individuals communicate(s) their solution to a panel of stakeholders at the conclusion of the course. As the capstone course in the Engineering Pathway, EDD engages students in critical thinking, problem-solving, time management, and teamwork skills.

**CAREER CLUSTER:  Engineering Systems Courses**

**PURDUE ENGINEERING TECHNOLOGY – First Year Course of Study (STEM)**

**6126 <u>Advanced Career & Technical Education, College Credit: STEM I-1</u>**
**6126 <u>Advanced Career & Technical Education, College Credit: STEM I-2</u>**
Advanced Career and Technical Education, College Credit is a course title covering any CTE advanced course offered for credit by an accredited post-secondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This program is being offered as a joint program of Career and Technical Education in coordination with Muncie Central, Purdue, MAGNA, and Mursix.

***First Year:***

***Design Thinking in Technology* – TECH 12000**
Students will engage in critical analysis of real-world problems and global challenges. They will demonstrate the ability to recognize opportunity and to take initiative in developing solutions applying the principles of human-centered design. Students will be able to communicate effectively and work well on teams. Problems and solutions will be examined from societal, cultural, and ethical perspectives. Learning Outcomes:
   1) Write a narrowly focused problem statement.
   2) Apply ethnographic methods to understand technological problems.
   3) Develop a search strategy, access technical databases, and evaluate results and source quality.
   4) Create a technical report documenting the results of the design process.
   5) Manage design projects, develop project timelines, and negotiate individual responsibilities and accountability in the team environment.
   6) Apply strategies of ideation to develop novel and innovative solutions.
   7) Demonstrate rapid prototyping solutions for purposes of design, testing and communication.

### Technical Graphics Communications – CGT 11000

This course is an introduction to the graphic language used to communicate design ideas using CAD. Topics include sketching, multi-view drawings, auxiliary views, pictorial views, working drawings, dimensioning practices, and section views. Learning Outcomes:
1) Describe the importance of engineering/technical graphics in the design of made products.
2) Communicate engineering ideas using visual techniques.
3) Utilize two and three-dimensional geometry for engineering and technical applications.
4) Apply basic industry graphics standards to engineering design.
5) Sketch basic freehand representations of technical concepts.
6) Demonstrate proficiency using basic 3D computer-aided design (CAD) processes.

### Engineering Technology Applications – ENGT 18100

Basic electrical, electronics, mechanical, and process laboratory skills are introduced, including simple troubleshooting techniques and safety practice. Relevant engineering technology projects are emphasized. Learning Outcomes:
1) Operate safely in a lab environment.
2) Use standard lab instrumentation to take measurements accurately.
3) Communicate relevant experimental results.
4) Complete an engineering technology team project.

**PURDUE ENGINEERING TECHNOLOGY – Second Year Course of Study**

**6126 Advanced Career & Technical Education, College Credit: STEM II-1**
**6126 Advanced Career & Technical Education, College Credit: STEM II-2**
The second year of the program will be a combination of classroom instruction and an immersive internship experience. The internship experience allows students to apply engineering technology knowledge and skills learned in the classroom working with advanced manufacturing partners Magna and/or Mursix. Students will also gain an understanding of the career opportunities in the field of engineering technology and advanced manufacturing. This program is being offered as a joint program of Career and Technical Education in coordination with Muncie Central, Purdue, MAGNA, and Mursix.

### Second Year:

### Engineering Technology Foundations – ENGT 18000

This course introduces School of Engineering Technology students to resources and skills that will help them to be successful in their studies and ultimately in their careers. The skills needed to define and solve technical problems in engineering technology are developed. Instruction is given in analytical and

computational problem-solving techniques. The application of software for analysis and communication is emphasized. Teamwork, global and societal concerns, and professional ethics are integrated into course projects. Learning Outcomes:

1) Select the most appropriate degree program.
2) Apply algebraic and trigonometric skills to solve engineering technology problems.
3) Apply computational tools to address engineering technology problems.
4) Identify professional issues in engineering technology.
5) Plan and execute a strategy for success in a chosen degree program.

### *Introduction to C Programming – CNIT 10500*

This course is an introduction to computer programming using the "C" language. The emphasis is on structured programming principles, and understanding the basic concepts that apply to engineering problems. Among topics covered in this course are: problem solving using top down design, using flowcharts to explain the program logic, selection structure, repetition structure, bitwise operations, arrays, pointers, strings, passing arguments, and sequential files.

## Career Pathway: Industrial Automation and Robotics

### 7106 Mechatronics Systems

Mechatronics Systems covers the basic electrical and mechanical components and functions of a complex mechatronics system. Through a systems approach, students will learn about mechanical components which lead and support the energy through a mechanical system to increase efficiency and to reduce wear and tear. By understanding the complete system, students will learn and apply troubleshooting strategies to identify, localize and (where possible) to correct malfunctions. Preventive maintenance of mechanical elements and electrical drives as well as safety issues within the system will also be discussed.

### *Second-Year Program*

### 7224 Industrial Automation and Robotics Capstone

The Automation and Robotics Capstone course focuses on the installation, maintenance, and repair of industrial robots. Students will also learn the basics of pneumatic, electro pneumatic and hydraulic control circuits as well as the basic theory, fundamentals of digital logic, and programming of programmable logic controllers (PLCs) in a complex mechatronic system. Students will learn to identify malfunctioning robots and to apply troubleshooting strategies to identify and localize problems caused by pneumatic and hydraulic control circuits and PLC hardware. Completing the capstone course will provide students the opportunity to earn a postsecondary certificate and will prepare students to take nationally recognized industry

certification exams. Hands-on projects and team activities will allow students to apply learning on the latest industry technologies. Extended work-based learning experiences and industry partnerships are highly encouraged for an authentic industry experience.

## Career Pathway: Heating, Ventilation, and Air Conditioning

*One-Year Program; Seniors Only*

### 7131 Principles of Heating, Ventilation, and Air Conditioning (HVAC)
Principles of Heating, Ventilation and Air Conditioning (HVAC) covers many of the topics needed for students to be successful in the mechanical construction industry. Its modules include history of HVAC industry, OSHA 10-hour construction industry training, communication and customer service skills. This course will also cover basic electricity concepts.

### 7125 HVAC Fundamentals
HVAC Fundamentals introduces fundamentals applicable to the heating and refrigeration phases of air conditioning. Includes types of units, parts, basic controls, functions, and applications. Emphasizes practices, tool and meter use, temperature measurement, heat flow, the combustion process and piping installation practices. Covers the basic sequence of operation for gas, oil and electric furnaces. Introduction to compression systems used in mechanical refrigeration including the refrigeration cycle and system components. Introduces safety procedures, proper use of tools used to install and service refrigeration equipment, refrigerant charging and recovery, system evacuation, calculating superheat and subcooling and using a refrigerant temperature/pressure chart. This course will use lecture, lab and online simulation to prepare students for the nationally recognized certification exam as part of the outcome assessment learning objectives.

### 7126 HVAC Service
HVAC Service continues the study of air conditioning and refrigeration along with the procedures used to analyze mechanical and electrical problems encountered when servicing heating systems. Students will better understand compressors, metering devices, system recharging, refrigerant recovery, basics of motor types, equipment installation and troubleshooting practices as they apply to air conditioning and refrigeration systems. Additionally, students will be able to understand electrical schematics and connection diagrams, combustion testing, venting and combustion air requirements, sequence of operation, heating controls, troubleshooting techniques, installation practices, basic codes applying to furnace codes, and service procedures. This course will use lecture, lab and online simulation to prepare students for the nationally recognized certification exam as part of the outcome assessment learning objectives.

**7244 HVAC Capstone**
The HVAC Capstone course covers procedures used to analyze mechanical and electrical problems encountered when servicing heating systems. Topics include electrical schematics and connection diagrams, combustion testing, venting and combustion air requirements, sequence of operation, heating controls, troubleshooting techniques, installation practices, basic codes applying to furnace codes, and service procedures. Students may also have the opportunity to gain an understanding of Heat Pump Systems or to develop skills needed to fabricate and install duct work. This course will use lecture, lab and online simulation to prepare students for the nationally recognized certification exam as part of the outcome assessment learning objectives.

**Career Pathway: Commercial Driver's License (CDL)**

*One-Year Program; Seniors Only*

**7386 Principles of Transportation and Logistics**
Principles of Transportation and Logistics examines the structure and importance of the commercial transportation industry in the logistics sector of business. Topics covered include an in-depth examination of the various modes of transportation including discussions of regulations, economics, characteristics, and development in major transportation modes. Also discussed are costing and pricing issues in transportation and relationship management between buyers and sellers of transportation. Additionally, this course introduces students to an overview of the CDL licensure and prepares them to get their CDL permit. Students are required to get a Department of Transportation Physical and Drug Screen and must be 18 years old by August of the school year in which they are enrolling in the class.

**7387 Commercial Drivers Operations Fundamentals**
Commercial Drivers Operation Fundamentals introduces students to an orientation of the CDL industry, the CDL license, driver qualifications, and the commercial vehicle. The vehicle control systems are reviewed and discussed. The vehicle systems including engine, suspension, electrical and many others are reviewed in detail. The vehicle inspection is practiced and applied. Range and on-the-road training in a tractor-trailer are major components of this course. Students will discuss driving in a variety of conditions including at night, emergencies, skidding, and extreme weather. Students will practice many different driving maneuvers including backing, turning, shifting, coupling, space, and speed management to prepare for the CDL A exam. This course must be taken concurrently with Advanced Commercial Drivers Operations.

**7388 <u>Advanced Commercial Drivers Operations</u>**
Students will continue to practice until mastery of the pre-trip inspection which is a critical component of passing the CDL A exam. Administrative and professional components of being a professional driver are discussed and explained including, hours of service, accident reporting, personal health, communication and Compliance, Safety, and Accountability (CAS). This course must be taken concurrently with Commercial Drivers Operations Fundamentals. Upon successful completion of Commercial Drivers Operation Fundamentals and Advanced Commercial Drivers Operations the student will be eligible to take the CDL A examination.

# CAREER AND TECHNICAL EDUCATION
# BUSINESS, MARKETING, & ENTREPRENEURSHIP

**4518 <u>Introduction to Business 1</u>**
**4518 <u>Introduction to Business 2</u>**
Introduces students to the world of business, including the concepts, functions, and skills required for meeting the challenges of operating a business in the twenty-first century on a local, national, and/or international scale. The course covers business management, entrepreneurship, marketing fundamentals, and business ethics and law. The course further develops business vocabulary and provides an overview of business and the role that business plays in economic, social, and political environments.

**4524 <u>Accounting Fundamentals 1</u>**
**4524 <u>Accounting Fundamentals 2</u>**
Accounting Fundamentals introduces the language of business using Generally Accepted Accounting Principles (GAAP) and procedures for proprietorships and partnerships using double-entry accounting. Emphasis is placed on accounting principles as they relate to both manual and automated financial systems. This course involves understanding, analyzing, and recording business transactions and preparing, analyzing, and interpreting financial reports as a basis for decision-making.

**4522 <u>Advanced Accounting 1</u>**
**4522 <u>Advanced Accounting 2</u>**
Advanced Accounting expands on the Generally Accepted Accounting Principles (GAAP) and procedures for proprietorships and partnerships using double-entry accounting covered in Introduction to Accounting. Emphasis is placed on accounting principles as they relate to both manual and automated financial systems. This course involves understanding, analyzing, and recording business transactions and preparing, analyzing, and interpreting financial reports as a basis for decision-making.

**5258 <u>Banking and Investment Capstone 1</u>**
**5258 <u>Banking and Investment Capstone 2</u>**
Finance and Investments addresses the need of schools in areas that have workforce demand in the finance industry. It analyzes and synthesizes high-level skills needed for a multitude of career in the banking and investment industry. Students learn banking, investments, and other finance fundamentals and applications related to financial institutions, business and personal financial services, investment and securities, risk management products, and corporate finance.

**4560 <u>Business Law and Ethics</u>**
*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 analysis.

**4512 <u>Business Math 1</u>**
**4512 <u>Business Math 2</u>**
Business Math is a course designed to prepare students for roles as entrepreneurs, producers, and business leaders by developing abilities and skills that are part of any business environment. A solid understanding of math including algebra, basic geometry, statistics, and probability provides the necessary foundation for students interested in careers in business and skilled trade areas. The content includes mathematical operations related to accounting, banking and finance, marketing, and management. Instructional strategies should include simulations, guest speakers, tours, Internet research, and business experiences.

**4512A <u>Applied Business Math 1</u>**
**4512A <u>Applied Business Math 2</u>**
Applied Business Math is a course designed to prepare students for roles as entrepreneurs, producers, and business leaders by developing abilities and skills that are part of any business environment. A solid understanding of the application of money management skills, navigating industry-specific technology and apps, establishing and managing budgets, and maintaining inventory for products and other necessary skills that provide the foundation for students interested in careers in business-related fields and everyday life. The content includes basic mathematical operations related to accounting, banking and finance, marketing, management, and retail. Instructional strategies should include simulations, guest speakers, tours, Internet research, and business experiences.

**5966 <u>Entrepreneurship and New Ventures 1</u>**
**5966 <u>Entrepreneurship and New Ventures 2</u>**
   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.

**4562 <u>Principles of Business Management 1</u>**
**4562 <u>Principles of Business Management 2</u>**
   Principles of Business Management examines business ownership, organization principles and problems, management, control facilities, administration, financial management, and development practices of business enterprises. This course will also emphasize the identification and practice of the appropriate use of technology to communicate and solve business problems and aid in decision making. Attention will be given to developing business communication, problem-solving, and decision-making skills using spreadsheets, word processing, data management, and presentation software.

**5268 <u>Administrative and Office Management 1</u>**
**5268 <u>Administrative and Office Management 2</u>**
   This course will be a combination of classroom and internship experiences to apply the knowledge and skills learned for administrative and office management.  This course prepares students to plan, organize, direct, and control the functions and processes of a firm or organization and to perform business-related functions. Students are provided opportunities to develop aptitudes and apply skills and knowledge in the areas of business administration, management, and finance. Individual experiences will be based on the student's career and educational goals. Required Prerequisites: Principles of Business Management or Principles of Marketing.

**5914 <u>Marketing Fundamentals 1</u>**
**5914 <u>Marketing Fundamentals 2</u>**
   This course provides a basic introduction to the scope and importance of marketing in the global economy. Emphasis is placed on oral and written communications, mathematical applications, problem-solving, and critical thinking skills as they relate to advertising/promotion/selling, distribution, financing, marketing-information management, pricing, and product/service management.

**5984 <u>Sports and Entertainment Marketing 1</u>**
**5984 <u>Sports and Entertainment Marketing 2</u>**
  This is a specialized marketing course that develops student understanding of the sport/event industries, their economic impact, and products; distribution systems and strategies; pricing considerations; product/service management, and promotion. Students acquire an understanding and appreciation for planning. Throughout the course, students are presented problem-solving situations for which they must apply academic and critical--thinking skills. Participation in cooperative education is an optional instructional method, giving students the opportunity to apply newly acquired marketing skills in the workplace. Emphasis is placed on financing, marketing, management, pricing, product promotion, and selling.

**5918 <u>Strategic Marketing 1</u>**
**5918 <u>Strategic Marketing 2</u>**
  Strategic Marketing builds upon the foundations of marketing and applies the functions of marketing at an advanced level. Students will study the basic principles of consumer behavior and examine the application of theories from psychology, social psychology and economics. The relationship between consumer behavior and marketing activities will be reviewed.

# CAREER AND TECHNICAL EDUCATION
# FAMILY AND CONSUMER SCIENCES

**7150 <u>Personal Finance and Banking</u>**
  Personal Finance and Banking emphasizes the management of individual financial resources for the growth and maintenance of personal wealth. Covers home buying and mortgage financing, installment financing, life, and health insurance, securities, commodities, and other investment opportunities. Students will gain an overview of banking.

**7143 <u>Management Fundamentals</u>**
  Management Fundamentals describe the functions of managers, including the management of activities and personnel. Describes the judicial system and the nature and sources of law affecting business. Studies contracts, and sales contracts with emphasis on Uniform Commercial Code Applications, remedies for breach of contract, and tort liabilities. Examines legal aspects of property ownership, structures of business ownership, and agency relationships.

**7169 <u>Culinary Arts</u>**
  Culinary Arts teaches students how to prepare the four major stocks, the five mother sauces (in addition to smaller sauces) and various soups. Additional emphasis is placed on the further development of the classical cooking methods. This course will also present the fundamentals of baking science

including terminology, ingredients, weights and measures, and proper use and care of equipment. Students will produce yeast goods, pies, cakes, cookies, and quick breads.

### 7170 <u>Nutrition Planning and Therapy</u>
This course presents the basic principles of nutrition; the role nutrients play in maintaining good health as well as their effect on certain disease states. Students will learn to modify diets to meet various nutritional needs and to plan menus using modified diet principles. This course teaches students to develop an in-depth understanding of the principles of diet therapy. Students will learn to assess patients 'nutritional needs, develop care plans, and implement a delivery system. Students will also learn documentation skills required by Centers for Medicare and Medicaid Services (CMS).

### 7171 <u>Nutrition</u>
Nutrition students will learn the characteristics, functions and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will be made aware of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation. This course will engage students in hands-on learning of nutritional concepts such as preparing nutrient dense meals or examining nutritional needs of student athletes.

### 7173 <u>Principles of Culinary and Hospitality</u>
Principles of Culinary and Hospitality is designed to develop an understanding of the hospitality industry and career opportunities, and responsibilities in the food service and lodging industry. Introduces procedures for decision making which affects operation management, products, labor, and revenue. Additionally, students will learn the fundamentals of food preparation, basic principles of sanitation, service procedures, and safety practices in the food service industry including proper operation techniques for equipment.

### 5330 <u>Adult Roles and Responsibilities</u>
Adult Roles and Responsibilities is recommended for all students as life foundation and academic enrichment and as a career sequence course for students with an interest in family and community services, personal and family finance, and similar areas. The course includes the study of interpersonal standards, lifespan roles and responsibilities, individual and family resource management, and financial responsibility and resources. Direct, concrete mathematics and language arts proficiencies will be applied. Service learning and other authentic applications are strongly recommended. This course provides the foundation for continuing and post-secondary education in all career areas related to individual and family life.

**5330A Applied Adult Roles and Responsibilities**
Applied Adult Roles and Responsibilities is recommended for all students as life foundations and academic enrichment for students with an interest in family and community services, personal and family finance, and similar areas. This course builds knowledge, skills, attitudes, and behaviors that students will need as they complete high school and prepare to take the next steps toward adulthood in today's society. The course includes the study of interpersonal standards, lifespan roles and responsibilities, individual and family resource management, and financial responsibility and resources.

**5362 Child Development**
Addresses the growth and development of children. Caregivers and future parents will study physical, social, emotional, and intellectual growth of children. This study will help the student progress academically through furthering his/her own expertise in child development and guidance. The class will be project-based and focus on parenting practices and skills that support positive development of children. Includes topics such as prenatal development, the needs of infants and children, and impacts of heredity, environment, and family and societal crisis on the development of the child. Ways of meeting children's needs for food, clothing, shelter, and caregiving will be explored.

**5360 Advanced Child Development 1**
**5360 Advanced Child Development 2**
Explores issues of child development and early childhood education with special emphasis on ways of guiding physical, social, emotional, intellectual, moral, and cultural development throughout childhood, including school-age children. Students will discuss practices that promote long-term well-being of children and their families, appropriate intervention strategies with individuals and groups of children, brain/learning research, and ideas for meeting needs of children. Child-related careers will be explored and field-based or school-based experiences will be encouraged.

**5334 Consumer Economics**
Consumer Economics enables students to achieve high standards and competencies in economic principles in contexts of high relevance and applicability to their individual, family, workplace, and community lives. The course focuses on the interrelationships among economic principles and individual and family roles of exchanger, consumer, producer, saver, investor, and citizen. Economic principles to be studied include scarcity, supply and demand, market structure, the role of government, money and the role of financial institutions, labor productivity, economic stabilization, and trade. Students understand how biology, chemistry, and physics principles apply to the composition of foods, the nutrition of foods, food product development, food processing, food safety and sanitation, food packaging, and food

storage. Students completing this course will be able to apply the principles of scientific inquiry to solve problems related to biology, physics, and chemistry in the context of highly advanced industry applications of foods.

## 5334A Applied Consumer Economics

Applied Consumer Economics enables students to apply economic principles to their individual, family, workplace, and community lives. The course focuses on the interrelationships among economic principles and individual and family roles of exchanger, consumer, producer, saver, investor, and citizen. Economic principles to be studied include scarcity, supply and demand, market structure, the role of government, money and the role of financial institutions, labor productivity, economic stabilization, and trade.

## 5342 Nutrition and Wellness 1
## 5342 Nutrition and Wellness 2

Nutrition and Wellness is an introductory course valuable for all students as a life foundation and academic enrichment; it is especially relevant for students interested in careers related to nutrition, food, and wellness. Major course topics include nutrition principles and applications; influences on nutrition and wellness; food preparation, safety, and sanitation; and science, technology, and careers in nutrition and wellness. A project-based approach that utilizes higher order thinking, communication, leadership, management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of nutrition, food, and wellness. Food preparation experiences are a required component. This course is the first in a sequence of courses that provide a foundation for continuing and post-secondary education in all career areas related to nutrition, food, and wellness.

## 5342A Applied Nutrition and Wellness 1
## 5342A Applied Nutrition and Wellness 2

Applied Nutrition and Wellness is an introductory course valuable for all students as a life foundation and academic enrichment. This is a nutrition class that introduces students to the basics of food preparation so they can become self-sufficient in accessing healthy and nutritious foods. Major course topics include nutrition principles and applications; influences on nutrition and wellness; food preparation, safety, and sanitation; and science, technology, and careers in nutrition and wellness. A project-based approach that utilizes higher-order thinking, communication, leadership, self-determination, management processes, and fundamentals to college and career success is recommended to integrate these topics into the study of nutrition, food, and wellness. Food preparation experiences are a required component.

**5340 Advanced Nutrition and Wellness 1**
**5340 Advanced Nutrition and Wellness 2**
Includes nutritional needs at various stages of life, technology's influence on the food we eat, and world concerns such as hunger. Laboratory experiences are encouraged. Nutrition and global concerns will be related and careers explored. Designed for students who are interested in advanced foods and nutritional needs. Topics include nutrition and wellness for individuals and families across the life span, community and world food concerns, impact of technology on the food and health industry, exploration of careers, and management of food-related resources.

**5364 Interpersonal Relationships**
Interpersonal Relationships is an introductory course that is especially relevant for students interested in careers that involve interacting with people. Major course topics include communication skills; leadership, teamwork, and collaboration; conflict prevention, resolution, and management; building and maintaining relationships; and individual needs and characteristics and their impacts on relationships. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of interpersonal relationships. This course provides a foundation for continuing and post-secondary education for all career areas that involve interacting with people both inside and outside of a business/organization, including team members, clients, patients, customers, and the general public.

**5364A Applied Interpersonal Relationships**
Applied Interpersonal Relationships is an introductory course that is relevant for students interested in careers that involve interacting with people and for everyday life relationships. Major course topics include communication skills; leadership, self-determination, teamwork, and collaboration; conflict prevention, resolution, and management; building and maintaining relationships; and individual needs and characteristics and their impacts on relationships. This course provides a foundation for all careers and everyday life relationships that involve interacting with people both inside and outside of a business/organization, including team members, clients, patients, customers, the general public, family, and friends.

**5350 Introduction to Housing and Interior Design**
This course is fashioned for students interested in home design and furnishings. Some activities include field trips, speakers from various fields of home design, planning the furnishings of a home, and drawing a home plan. Topics may include housing to meet special needs, principles of design related to interiors, housing, and architecture; floor planning skills; and housing-related careers.

**5380 Introduction to Fashion and Textiles**
This class addresses skills related to design, production, and distribution in the textiles, fashion, and home arts industries. Topics include exploration of textiles and fashion industries; design in textiles and apparel; social, psychological, cultural, and environmental aspects of clothing; related equipment and tools and technology that impact the industry; and construction and alteration skills.

**CAREER CLUSTER: Education and Training**

**5408 Education Professions I-I**
**5408 Education Professions I-2**
Education Professions I provides the foundation for employment in education and related careers and prepares students for study in higher education. An active learning approach that utilizes higher order thinking, communication, leadership, and management processes is recommended in order to integrate suggested topics into the study of education and related careers. The course of study includes, but is not limited to: the teaching profession, the learner and the learning process, planning instruction, learning environment, and instructional and assessment strategies. Exploratory field experiences in classroom settings and career portfolios are components.

**7161 Principles of Teaching**
Educational careers, teaching preparation, and professional expectations as well as requirements for teacher certification. Current trends and issues in education will be examined. A minimum 20-hour classroom observation experience is required for successful completion of this course.

**7157 Child and Adolescent Development**
Child and Adolescent Development examines the physical, social, emotional, cognitive, and moral development of the child from birth through adolescence with a focus on the middle years through adolescence. Basic theories of child development, biological and environmental foundations of development, and the study of children through observation and interviewing techniques are explored. The influence of parents, peers, the school environment, culture and the media are discussed. An observation experience up to 20 hours may be required for completion of this course. This course has been approved to be offered for dual credit. Students pursuing this course for dual credit are still required to meet the minimum prerequisites for the course and pass the course with a C or better for dual credit to be awarded.

**7162 Teaching and Learning**
Teaching and Learning provides students the opportunity to apply many of the concepts that they have learned throughout the Education Professions

pathway. In addition to a focus on best practices, this course will provide an introduction to the role that technology plays in the modern classroom. Through hands-on experience with educational software, utility packages, and commonly used microcomputer hardware, students will analyze ways to integrate technology as a tool for instruction, evaluation, and management.

**5404 <u>Education Professions II-1</u>**
**5404 <u>Education Professions II-2</u>**

Education Professions II prepares students for employment in education and related careers and provides the foundation for study in higher education in these career areas. An active learning approach that utilizes higher order thinking, communication, leadership, and management processes is recommended in order to integrate suggested topics into the study of education and related careers. The course of study includes, but is not limited to: the teaching profession, the learner and the learning process, planning instruction, learning environment, and instructional and assessment strategies. Extensive field experiences in one or more classroom settings, resumes, and career portfolios are required components.

**CAREER CLUSTER: Hospitality and Human Services**

**7176 <u>Principles of Human Services</u>**

Principles of Human Services explores the history of human services, career opportunities, and the role of the human service worker. Focuses on target populations and community agencies designed to meet the needs of various populations. The course includes a required job shadowing project in a Human Services setting (a suggested four-hour minimum to meet Ivy Tech requirements). This course will also encourage cultural awareness and appreciation of diversity. Focuses on cultural variations in attitudes, values, language, gestures, and customs. Includes information about major racial and ethnic groups in the United States.

**7174 <u>Understanding Diversity</u>**

Understanding Diversity encourages cultural awareness and appreciation of diversity. Focuses on cultural variations in attitudes, values, language, gestures, and customs. Includes information about major racial and ethnic groups in the United States.

**7177 <u>Relationships and Emotions</u>**

Relationships & Emotions examines the key elements of healthy relationships. Explores the main problems that damage relationships. Presents research findings on successful and unsuccessful relationships, and emotional connections. Explores the impact of one's emotional and relationship history on current and future romantic relationships. Presents practical, scientific-based skills for improving relationships. Additionally, this course offers practical

and useful information for people who have experienced loss. Students have the opportunity to evaluate their own experiences and attitudes toward loss and grief.

**5336 <u>Human and Social Services I-1</u>**
**5336 <u>Human and Social Services I-2</u>**

Human and Social Services I is an introductory/exploratory course for students interested in careers in human and community services and other helping professions. Areas of exploration include family and social services, youth development, and adult and elder care, and other for profit and non-profit services. This project-based course will help students integrate higher order thinking, communication, leadership, and management processes to conduct investigations in human and social services at the local, state, national, or global/world level. Research and development, interdisciplinary projects, and/or collaboration with community agencies or organizations or student organizations are appropriate approaches. Students will be introduced to human and social services professions through presentations from a variety of guest speakers, job shadowing, field trips and introductory and exploratory field experiences. Service-learning experiences are highly recommended.

**5462 <u>Human and Social Services II-1</u>**
**5462 <u>Human and Social Services II-2</u>**

The course prepares students for occupations and higher education programs related to assisting individuals and families in meeting their potential. Through work-based experiences, students apply the knowledge and skills developed in the Human Services Foundations course. Concentration areas include family and social services, youth development, and adult and elder care. Ethical, legal, and safety issues, as well as helping processes and collaborative ways of working with others, will be addressed. Learning experiences will involve analysis of the influence of culture and socioeconomic factors on individual choices and opportunities, service delivery models, and theoretical perspectives. Student laboratory/field experiences may be either school-based, if available, or as part of an internship in community-based agencies, or a combination of the two.

**5456 <u>Nutrition Science Careers I-1</u>**
**5456 <u>Nutrition Science Careers I-2</u>**

Nutrition Science Careers introduces students to careers in nutrition, dietetics, food science, food research and development, food service, and related careers. The course of study includes topics and issues in nutrition; food science topics and issues; topics related to management of daily living needs of individuals and families; nutrition and foods for children and the elderly; topics related to cleaning and maintenance, purchasing, and food preparation; managing operations in food production, food science, or food

research and development establishments.  Laboratory experiences with industry applications are a required component of this course of study.

### 5457 Nutrition Science Careers II-1
### 5457 Nutrition Science Careers II-2

This course prepares students for careers and higher education programs related to nutrition, dietetics, food science, food research and development, and related careers that focus on assisting individuals and families in managing their personal, family, and social needs regarding nutrition, diet, and foods. Through work-based experiences, students apply the knowledge and skills developed in the Nutrition Science Careers I course. The course of study includes, but is not limited to: advanced topics and issues in nutrition; topics and issues related to maintaining the food supply; topics related to cleaning and maintenance, purchasing, and food preparation; managing operations in food production, food science, or food research and development establishments; providing for the dietary needs of persons with special requirements; related research, development, and testing. Ethical, legal, and safety issues, as well as helping processes and collaborative ways of working with others are to be addressed.

# CAREER AND TECHNICAL EDUCATION
# HEALTH SCIENCES

### 5276 Anatomy and Physiology 1
### 5276 Anatomy and Physiology 2

Anatomy & Physiology is a course in which students investigate concepts related to Health Science, with emphasis on the interdependence of systems and the contributions of each system to the maintenance of a healthy body. It introduces students to the cell, which is the basic structural and functional unit of all organisms, and covers tissues, integument, skeletal, muscular, and nervous systems as an integrated unit. Through instruction, including laboratory activities, students apply concepts associated with Human Anatomy & Physiology. Students will understand the structure, organization, and function of the various components of the healthy body to apply this knowledge in all health-related fields.

### 5274 Medical Terminology 1 / HLHS 101 Ivy Tech
### 5274 Medical Terminology 2 / HLHS 101 Ivy Tech

Medical Terminology prepares students with language skills necessary for effective, independent use of health and medical reference materials. It includes the study of health and medical abbreviations, symbols, and Greek and Latin word part meanings, all taught within the context of body systems. This course builds skills in pronunciation, spelling, and defining new words

encountered in verbal and written information in the healthcare industry. Students have the opportunity to acquire essential skills for accurate and logical communication, and interpretation of medical records. Emphasis is on forming a foundation of a medical vocabulary including; appropriate and accurate meaning, spelling, and pronunciation of medical terms, and abbreviations, signs, and symbols.

**CAREER CLUSTER: Biomedical Sciences and Technology**

### 5218 Principles of Biomedical Sciences
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: This course aligns with the PLTW Principles of Biomedical Sciences curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

### 5216 Human Body Systems
Human Body Systems is a course designed to engage students in the study of basic human physiology and the care and maintenance required to support the complex systems. Using a focus on human health, students will employ a variety of monitors to examine body systems (respiratory, circulatory, and nervous) at rest and under stress, and observe the interactions between the various body systems. Students will use appropriate software to design and build systems to monitor body functions. NOTE: This course aligns with the PLTW Human Body Systems curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

### 5217 Medical Interventions
Medical Interventions is a course that studies medical practices including interventions to support humans in treating disease and maintaining health. Using a project-based learning approach, students will investigate various medical interventions that extend and improve quality of life, including gene

therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Students will also study the design and development of various interventions. Lessons will cover the history of organ transplants and gene therapy with additional readings from current scientific literature addressing cutting edge developments. NOTE: This course aligns with the PLTW Medical Interventions curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

### 5219 Biomedical Innovations

Biomedical Innovation is a capstone course designed to give students the opportunity to design innovative solutions for the health challenges of the 21st Century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. Students have the opportunity to work on an independent project and may work with a mentor or advisor from a healthcare or postsecondary industry. Throughout the course, students are expected to present their work to an adult audience that may include representatives from the local business and healthcare community. NOTE: This course aligns with the PLTW Biomedical Innovations curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

*CTE Pathway Health Sciences Programs, Health Sciences I and II – Nursing, PLTW Biomedical, and Dental Careers are listed under the Muncie Area Career Center section.*

# CAREER AND TECHNICAL EDUCATION COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

## CAREER CLUSTER: Computer Science (STEM)

### 4803 Introduction to Computer Science

Introduction 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 is a focus on the areas of computer programming, gaming/mobile development, and artificial intelligence/robotics.

### 4565 Computing Foundations for a Digital Age

Computers and the internet have revolutionized the way we access and disseminate information. As technology continues to change at an ever-increasing pace, the need for students to gain a foundational understanding of computer science is clear. Computing Foundations for a Digital Age is designed to introduce students to five major topics within computer science including computing systems, networks and the internet, data and analysis,

### 4801 Computer Science I-1
### 4801 Computer Science I-2

Computer Science I introduces the structured techniques necessary for the efficient solution of business-related computer programming logic problems and coding solutions into a high-level language. Topics include program flow-charting, pseudo coding, and hierarchy charts as a means of solving problems. The course covers creating file layouts, print charts, program narratives, user documentation, and system flowcharts for business problems; algorithm development and review, flowcharting, input/output techniques, looping, modules, selection structures, file handling, and control breaks.

### 5236 Computer Science II-1
### 5236 Computer Science II-2

Computer Science II explores and builds skills in programming and a basic understanding of the fundamentals of procedural program development using structured, modular concepts. Coursework emphasizes logical program design involving user-defined functions and standard structure elements. Discussions will include: the role of data types, variables, structures, addressable memory locations, arrays and pointers, and data file access methods. An emphasis on logical program design using a modular approach, which involves task-oriented program functions.

### 5253 Computer Science III – Cybersecurity Capstone 1
### 5253 Computer Science III – Cybersecurity Capstone 2

Computer Science III: Cybersecurity introduces the secure software development process including: designing secure applications, writing secure code designed to withstand various types of attacks, and security testing and auditing. It focuses on the security issues a developer faces, common security vulnerabilities and flaws, and security threats. The course explains security principles, strategies, coding techniques, and tools that can help make software fault tolerant and resistant to attacks. Students will write and analyze code that demonstrates specific security development techniques. Students will also learn about cryptography as an indispensable resource for implementing security in real-world applications.

### 7178 Advanced Cybersecurity

Students will acquire the fundamentals of information and data security and understand the vulnerability most organizations have in their security systems with an emphasis on firewalls, security plans and Virtual Private Networks

(VPNs). Discussions will include data security methods, authentication, network attacks, malicious code and viruses, wireless security, e-mail and web security and disaster recovery. This course will also focus on the managerial aspects of information security and assurance. Topics covered include access control models, information security governance, and information security program assessment and metrics. Coverage on the foundational and technical components of information security is included to reinforce key concepts, such as security planning and contingencies, security policies, security management models and practices and ethics.

### 7183 Principles of Computing

Principles of Computing provides students the opportunity to explore how computers can be used in a wide variety of settings. The course will begin by exploring trends of computing and the necessary skills to implement information systems. Topics include operating systems, database technology, cybersecurity, cloud implementations and other concepts associated with applying the principles of good information management to the organization. Students will also have the opportunity to utilize basic programming skills to develop scripts designed to solve problems. Students will learn about algorithms, logic development and flowcharting.

### 7184 Software Development

Software Development introduces students to concepts and practices of programming languages and software development. Students are introduced to algorithms and development tools used to document/implement computer logic. Discusses the history of software development, the different types of programming such as real time processing, web/database applications, and different program development environments. Concepts will be applied using different programming languages, and students will develop and test working programs in an integrated system.

### 7185 Website and Database Development

Website and Database Development will provide students a basic understanding of the essential Web and Database skills and business practices that directly relate to Internet technologies used in Web site and Database design and development. Students will learn to develop Web sites using Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Additionally, students will be introduced to the basic concepts of databases including types of databases, general database environments, database design, normalization and development of tables, queries, reports, and applications. Students will be familiarized with the use of ANSI Standard Structured Query Language. Students will be introduced to data concepts such as data warehousing, data mining, and BIG Data. Students will develop a business application using database software such as Microsoft Access.

**7179 Cybersecurity Fundamentals**
This course introduces fundamental networking protocols and their hierarchical relationship in the context of conceptual Information Communication Technology (ICT) frameworks. Students will learn how networked hosts and applications communicate across networks. Emphasis is placed on security throughout the entire SDLC (Systems Development Life Cycle).

**CAREER CLUSTER: Information Technology**

**4528 Digital Applications and Responsibility 1**
**4528 Digital Applications and Responsibility 2**
Digital Applications and Responsibility prepares students to use technology in an effective and appropriate manner in school, in a job, or everyday life. Students develop skills related to word processing, spreadsheets, presentations, and communications software. Students learn what it means to be a good digital citizen and how to use technology, including social media, responsibly. Students expand their knowledge of how to use digital devices and software to build decision making and problem-solving skills. Students should be provided with the opportunity to seek industry-recognized digital literacy certifications.

**4528A Applied Digital Applications and Responsibility 1**
**4528A Applied Digital Applications and Responsibility 2**
Applied Digital Applications and Responsibility prepares students to use technology in an effective and appropriate manner in school, in a job, or everyday life. Students develop skills related to word processing, spreadsheets, presentations, and communications software and may use highly specialized or individualized technology or software. Students learn what it means to be a good digital citizen and how to use technology, including social media, responsibly. Students expand their knowledge of how to use digital devices and software to build decision-making and problem-solving skills. Students may be provided with the opportunity to seek industry-recognized digital literacy certifications.

**5230 Information Technology Support 1-1**
**5230 Information Technology Support 1-2**
Information Technology 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.

**4516 <u>Computer Illustration & Graphics 1</u>**
**4516 <u>Computer Illustration & Graphics 2</u>**

Computer Illustration and Graphics introduces students to the computer's use in visual communication. The focus of the course is on basic computer terminology and use, mastering fundamental skills, and developing efficient working styles. These skills are then developed by creating work with imaging, drawing, interactive, and page layout software. The course 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.

**5234 <u>Networking I-1</u>**
**5234 <u>Networking I-2</u>**

Networking I introduces students to 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 are introduced and emphasized throughout this course, which offers students the critical information needed to successfully move into a role as an IT professional supporting networked computers. Concepts covered will include TCP/IP client administration, planning a network topology, configuring the TCP/IP protocol, managing network clients, configuring routers and hubs, as well as creating a wireless LAN.

**4574 <u>Web Design</u>**

This course 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. Through hands-on experiences students will learn to use various software programs for creating digitally-generated or computer-enhanced media.

## CAREER AND TECHNICAL EDUCATION
## MUNCIE AREA CAREER CENTER PROGRAMS

The Muncie Area Career Center (MACC) offers career and technical education training for high school juniors and seniors. A Career & Technical Education (CTE) Pathway is a series of classes focused on a specific career field. Many MACC programs provide students the opportunity to complete Graduation Pathway Diploma requirements for Postsecondary Ready Competencies and/or Employability Skills requirements.

A **CTE Concentrator** at the Muncie Area Career Center is a student who completes the three courses in a first-year program of study in a specific career field.  A CTE Pathway *may* include opportunities for the student to:

- Earn dual credits in a CTE Pathway
- Earn Industry Certification
- Participate in an embedded internship or work-based learning experience

CTE Pathways allows students the opportunity to learn more about a specific career field. Students with a career focus before high school graduation are better prepared to select the right post-secondary option:  Apprenticeship, Community College, University, Certification or Technical Training, Military Service, or Career.

## Internships and Job Shadowing Experience

- Internship experiences are required in some program areas optional for others, and sometimes limited to senior-level students. Most internships are non-paid, and students must meet all required criteria to participate, as well as provide their own transportation.

- All MACC students are required to participate in one job shadowing experience per year. The job shadowing activities include telephone contact with an employer, two letters, observation at the work site, and evaluation essay of the experience.

The section below is organized by Career Pathways, with each Pathway broken into a First- and Second-Year Program. Students are encouraged to consider various Career Pathways and select one that is of the greatest interest to them. Students who apply and are accepted may complete both the First- and Second-Year Program within a specific Career Pathway, or they may choose to complete one Pathways First-Year Program as a junior and other Pathways First-Year Program as a senior.

## Career Pathway: Welding Technology

### *First-Year Program*

### 7110 Principles of Welding Technology
Principles of Welding Technology includes classroom and laboratory experiences that develop a variety of skills in oxy-fuel cutting and basic welding. This course is designed for individuals who intend to make a career as a Welder, Technician, Designer, Researcher, or Engineer. Emphasis is placed on safety at all times. OSHA standards and guidelines endorsed by the American Welding Society (AWS) are used. Instructional activities emphasize properties of metals, safety issues, blueprint reading, electrical principles, welding symbols, and mechanical drawing through projects and exercises that

teach students how to weld and be prepared for postsecondary and career success.

### 7111 Shielded Metal Arc Welding

Shielded Metal Arc Welding involves the theory and application of the Shielded Metal Arc Welding process. Process theory will include basic electricity, power sources, electrode selection, and all aspects pertaining to equipment operation and maintenance. Laboratory welds will be performed in basic weld joints with a variety of electrodes in the flat, horizontal and vertical positions. Emphasis will be placed on developing the basic skills necessary to comply with AWS industry standards.

### 7101 Gas Welding Processes

Gas Welding Processes is designed to cover the operation of Gas Metal Arc Welding (MIG) equipment. This will include all settings, adjustments and maintenance needed to weld with a wire feed system. Instruction on both short-arc and spray-arc transfer methods will be covered. Tee, lap, and open groove joints will be done in all positions with solid, flux core, and aluminum wire. Test plates will be made for progress evaluation. Schools may choose to offer the course as a comprehensive MIG Welding course or a combination of introductory MIG and TIG Welding operations.

*Second-Year Program*

### 7226 Welding Technology Capstone

The Welding Technology Capstone course builds upon the knowledge and skills developed in Welding Fundamentals, Shielded Metal Arc Welding, and Gas Metal Arc Welding by developing advanced welding skills in Gas Tungsten Arc Welding (TIG), Pipe Welding, and Fabrication. As a capstone course, students should have the opportunity to apply their knowledge and use skills through dual enrollment with Ivy Tech Community College and/or an intensive work-based learning experience.

### Career Pathway: Construction Trades - Carpentry

*First-Year Program*

### 7130 Principles of Construction Trades

Principles of Construction Trades prepares students with the basic skills needed to continue in a construction trade field. Topics will include an introduction to the types and uses for common hand and power tools, learn the types and basic terminology associated with construction drawings, and basic safety. Additionally, students will study the roles of individuals and companies within the construction industry and reinforce mathematical and communication skills necessary to be successful in the construction field.

### 7123 <u>Construction Trades: General Carpentry</u>

Construction Trades: General Carpentry builds upon the skills learned in the Principles of Construction Trades and examines the basics of framing. This includes studying the procedures for laying out and constructing floor systems, wall systems, ceiling joist and roof framing, and basic stair layout. Additionally, students will be introduced to building envelope systems.

### 7122 <u>Construction Trades: Framing and Finishing</u>

Construction Trades: Framing and Finishing prepares students with advanced framing skills along with interior and exterior finishing techniques. Topics include roofing applications, thermal and moisture protection, exterior finishing, cold-formed steel framing, drywall installation and finishing, doors and door hardware, suspended ceilings, window, door, floor, and ceiling trim, and cabinet installation.

## *Second-Year Program*

### 7242 <u>Construction Trades Capstone</u>

The Construction Trades Capstone course covers the basics of electricity and working with concrete. Electrical topics include the National Electric Code, electrical safety, electrical circuits, basic electrical construction drawings, and residential electrical services. Students may also gain an understanding of concrete properties, foundations, slab-on-grades, and vertical and horizontal formwork. The course prepares students for the NCCER Carpentry Forms Level 3 and Electrical Level 1 certificates.

## <u>Career Pathway: Construction Trades - Electrical</u>

## *First-Year Program*

### 7130 <u>Principles of Construction Trades</u>

Principles of Construction Trades prepares students with the basic skills needed to continue in a construction trade field. Topics will include an introduction to the types and uses for common hand and power tools, learn the types and basic terminology associated with construction drawings, and basic safety. Additionally, students will study the roles of individuals and companies within the construction industry and reinforce mathematical and communication skills necessary to be successful in the construction field.

### 7124 <u>Electrical Fundamentals</u>

This course covers NCCER Electrical Level 1. Its modules cover topics such as orientation to the electrical trade, electrical safety, introduction to electrical circuits, electrical theory, introduction to the National Electrical Code, device boxes, hand bending, raceways and fittings, conductors and cables, basic

electrical construction drawings, residential electrical services, and electrical test equipment. The NCCER Electrical Level 1 certificate and wallet card will also be awarded upon successful completion of this course.

### 7119 Advanced Electrical

Advanced Electrical covers topics such as alternating current, motors: theory and application, electric lighting, conduit bending, and pull and junction boxes. The second part of the course will cover topics such as conductor installations, cable trays, conductor terminations and splices, grounding and bonding, circuit breakers and fuses, control systems, and fundamental concepts. Students will be ready to complete the NCCER Electrical Level 2 certificate upon successful completion of the course.

### *Second-Year Program*

### 7263 Construction Trades Electrical Capstone

Construction Trades Electrical Capstone builds upon the skills learned in Electrical Fundamentals and Advanced Electrical. Topics include load calculations – branch and feeder circuits, conductor selection and calculations, practical applications of lighting. This course will also cover commercial electrical services including distribution equipment, transformers, and voice, data and video. Completion of this course will prepare students for the NCCER Electrical Level 3 certificate. Students may also complete an Ivy Tech CT by completing coursework in general carpentry.

### Career Pathway: Industrial Maintenance - Electrical

### *First-Year Program*

### 7108 Principles of Advanced Manufacturing

Principles of Advanced Manufacturing is a course that includes classroom and laboratory experiences in Industrial Technology and Manufacturing Trends. Domains include safety and impact, manufacturing essentials, lean manufacturing, design principles, and careers in advanced manufacturing. Hands-on projects and team activities will allow students to apply learning on the latest industry technologies.

### 7103 Advanced Manufacturing Technology

Advanced Manufacturing Technology introduces manufacturing processes and practices used in manufacturing environments. The course also covers key electrical principles, including current, voltage, resistance, power, inductance, capacitance, and transformers, along with basic mechanical and fluid power principles. Topics include, types of production, production materials, machining and tooling, manufacturing planning, production control, and product distribution will be covered. Students will be expected to

understand the product life cycle from conception through distribution. This course also focuses on technologies used in production processes. Basic power systems, energy transfer systems, machine operation, and control will be explored. This course will use lectures, labs, online simulation, and programming to prepare students for Certified Production Technician Testing through the Manufacturing Skill Standards Council (MSSC).

### 7102 Industrial Electrical Fundamentals

The Industrial Electrical Fundamentals course will introduce students to the National Electric Code and its application in designing and installing electrical circuits, selecting wiring materials and devices, and choosing wiring methods. Students will also gain a general understanding of common types of electric motors.

### 7260 Industrial Electrical Capstone

The Industrial Electrical Capstone course is designed to provide an understanding of circuits using alternating current and the motor operation as well as the operation and programming of programmable logic controllers (PLC). The course will also examine the electrical components in a complex mechatronic system. This course will give each student a general understanding of common types of electric motors, extending from the small shaded pole fan motors to the large three-phase motors. This course will use lecture, lab, online simulation and programming to prepare students for the C-207 Programmable Controller Systems 1 Certification through Smart Automation Certification Alliance (SACA).

### Career Pathway: Digital Design

### *First-Year Program*

### 7140 Principles of Digital Design

Principles of Digital Design introduces students to fundamental design theory. Investigations into design theory and color dynamics will provide experiences in applying design theory, ideas and creative problem solving, critical peer evaluation, and presentation skills. Students will have the opportunity to apply the design theory through an understanding of basic photographic theory and technique. Topics will include image capture, processing, various output methods, and light.

### 7141 Digital Design Graphics

Digital Design Graphics will help students to understand and create the most common types of computer graphics used in visual communications. Skills are developed through work with professional vector-based and page layout software used in the industry. Additionally, students will be introduced to a full range of image input technology and manipulation including conventional

photography, digital imaging, and computer scanners. Students will learn to communicate concepts and ideas through various imaging devices.

### 5550 Graphic Design and Layout

Graphic Design and Layout teaches design process and the proper and creative use of type as a means to develop effective communications for global, corporate and social application. Students will create samples for a portfolio, which may include elements or comprehensive projects in logo, stationery, posters, newspaper, magazine, billboard, and interface design

*Second-Year Program*

### 7246 Digital Design Capstone

The Digital Design Capstone course provides students the opportunity to dive deeper into advanced concepts of Visual Communication including user experience/user interface design, video production editing, animation and/or web design. Depending on the length of the course, students may focus their efforts on one area or explore multiple aspects.

## Career Pathway: Software Development

**First-Year Program**

### 7183 Principles of Computing

Principles of Computing provides students the opportunity to explore how computers can be used in a wide variety of settings. The course will begin by exploring trends of computing and the necessary skills to implement information systems. Topics include operating systems, database technology, cybersecurity, cloud implementations and other concepts associated with applying the principles of good information management to the organization. Students will also have the opportunity to utilize basic programming skills to develop scripts designed to solve problems. Students will learn about algorithms, logic development and flowcharting.

### 7185 Website and Database Development

Website and Database Development will provide students a basic understanding of the essential Web and Database skills and business practices that directly relate to Internet technologies used in Web site and Database design and development. Students will learn to develop Web sites using Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Additionally, students will be introduced to the basic concepts of databases including types of databases, general database environments, database design, normalization and development of tables, queries, reports, and applications. Students will be familiarized with the use of ANSI Standard Structured Query Language. Students will be introduced to data concepts such as data warehousing, data mining, and

BIG Data. Students will develop a business application using database software such as Microsoft Access.

**7184 Software Development**
 Software Development introduces students to concepts and practices of programming languages and software development. Students are introduced to algorithms and development tools used to document/implement computer logic. Discusses the history of software development, the different types of programming such as real time processing, web/database applications, and different program development environments. Concepts will be applied using different programming languages, and students will develop and test working programs in an integrated system.

*Second-Year Program*

**7253 Software Development Capstone**
Software Development Capstone provides a basic understanding of the fundamental concepts involved when using an object oriented programming language. The emphasis is on logical program design using a modular approach involving task-oriented program functions. Object-oriented concepts such as methods, attributes, inheritance, exception handling, and polymorphism are utilized. Applications are developed using these concepts and include developing a graphical user interface, selecting forms and controls, assigning properties and writing code. Students will also build upon their web design experiences in previous courses by taking an in-depth look into client- and server-side scripting aspects including Java Script and PHP: hypertext preprocessor along with other scripting tools.

**Career Pathway: Early Childhood Education**

**First-Year Program**

**7160 Principles of Early Childhood Education**
This course provides students with an overview of skills and strategies necessary to successfully complete a certificate. Additionally, it 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. This course also examines basic principles of child development, Developmentally Appropriate Practices (DAP), importance of family, licensing, and elements of quality care of young children with an emphasis on the learning environment related to health, safety, and nutrition. Students may be required to complete observations and field experiences with children as related to this course.

### 7158 Early Childhood Education Curriculum

Early Childhood Education Curriculum examines developmentally appropriate environments and activities in various childcare settings while exploring the varying developmental levels and cultural backgrounds of children. Students may be required to complete observations and field experiences with children as related to this course.

### 7159 Early Childhood Education Guidance

This course allows students to analyze developmentally appropriate guidance, theory and implementation for various early care and education settings. It also provides a basic understanding of the anti-bias/multicultural emphasis in the field of early childhood. Students may be required to complete observations and field experiences with children as related to this course.

*Second-Year Program*

### 7259 Early Childhood Education Capstone

This course will prepare students to complete the application, CDA exam, and verification process for the Child Development Associate (CDA) credential. Students may also study the physical, social, emotional, cognitive, and moral development of children from conception to age twelve. Theories of child development, biological and environmental foundations, prenatal development, the birth process, and the newborn baby will be discussed. Additionally, students will explore the aspects of early literacy skill development in young children from birth through third grade. Students will explore techniques, technological tools and other learning opportunities that encourage positive attitudes in children regarding listening, speaking, reading and writing activities. In the course, students will research, examine and explore the use of observation in screening and assessment to promote healthy literacy development in early childhood education. Finally, students will be provided an introduction to caring for each exceptional child. This includes theories and practices for producing optimal developmental growth. Students may be required to complete observations and field experiences with children as related to this course.

## Career Pathway: Pre-Nursing

## First-Year Program

### 7168 Principles of Healthcare

Principles of Healthcare content includes skills common to specific health career topics such as patient nursing care, dental care, animal care, medical laboratory, public health, and an introduction to healthcare systems. Lab experiences are organized and planned around the activities associated with the student's career objectives.

### 5274 Medical Terminology

Medical Terminology prepares students with language skills necessary for effective, independent use of health and medical reference materials. It includes the study of health and medical abbreviations, symbols, and Greek and Latin word part meanings, all taught within the context of body systems. This course builds skills in pronouncing, spelling, and defining new words encountered in verbal and written information in the healthcare industry. Students have the opportunity to acquire essential skills for accurate and logical communication, and interpretation of medical records. Emphasis is on forming a foundation of a medical vocabulary including; appropriate and accurate meaning, spelling, and pronunciation of medical terms, and abbreviations, signs, and symbols.

### 7166 Healthcare Specialist: CNA

The Healthcare Specialist: CNA course prepares individuals desiring to work as nursing assistants with the knowledge, skills and attitudes essential for providing basic care in extended care facilities, hospitals and home health agencies under the direction of licensed nurses. The course will introduce students to the disease process and aspects of caring for a long-term care resident with dementia. Individuals who successfully complete this course are eligible to apply to sit for the Indiana State Department of Health (ISDH) certification exam for nursing assistants. This course meets the minimum standards set forth by the ISDH for Certified Nursing Assistant training and for health care workers in long-term care facilities.

*Second-Year Program*

### 7255 Healthcare Specialist Capstone

The capstone course will provide Healthcare students acquire additional knowledge and skills necessary to work in a variety of health care settings beyond a long term care facility, including hospitals, doctor's offices and clinics. Students can accomplish this goal by completing coursework that will cover topics such as Medical Law and Ethics, Electronic Health Records, and/or Behavioral Health. Schools may offer additional healthcare certifications such as the Certified Clinical Medical Assistant or Phlebotomy along with the coursework or in place of the coursework.

### Career Pathway: Dental Careers

*First-Year Program*

### 7315 Principles of Dental Careers

Principles of Dental Careers will provide the foundational knowledge and skills necessary to pursue a career in the Dental Field. A focus will be placed on the

role of the modern dental assistant and will cover key pre-clinical procedures and beginning dental terminology.

**7316 Dental Careers Fundamentals**
Dental Careers Fundamentals will build upon the knowledge and skills in the principles course. Students will understand and practice beginning chairside functions of the Dental Assistant along with a focus on the Anatomy and Physiology of the head, neck and oral cavity. Students will also study tooth anatomy, physiology, and morphology. This part of the program will prepare students for the Anatomy, Morphology, and Physiology exam of the NELDA certification.

**7317 Advanced Dental Careers**
Advanced Dental Careers Fundamentals will build upon the knowledge and skills developed in the first two courses. Students will study more advanced chairside assisting functions along with advanced infection control techniques. Additionally, students will explore preventive dentistry practices and dental emergencies. This course will prepare students for the ICE exam of the NELDA certification.

*Second-Year Program*

**7318 Dental Careers Capstone (*for second-year students in the graduating class of 2025 and beyond*)**
Dental Careers capstone will provide the opportunity for increased skill development in clinical support through work-based learning experiences. Students will also prepare for the Radiation, Health and Safety, which is the third and final part of the NELDA certification. The capstone course may also provide the opportunity to review and prepare for the entire NELDA certification.

**Career Pathway: Emergency Medical Services**

*First-Year Program*

**7168 Principles of Healthcare**
Principles of Healthcare content includes skills common to specific health career topics such as patient nursing care, dental care, animal care, medical laboratory, public health, and an introduction to healthcare systems. Lab experiences are organized and planned around the activities associated with the student's career objectives.

**5274 Medical Terminology**
Medical Terminology prepares students with language skills necessary for effective, independent use of health and medical reference materials. It

includes the study of health and medical abbreviations, symbols, and Greek and Latin word part meanings, all taught within the context of body systems. This course builds skills in pronouncing, spelling, and defining new words encountered in verbal and written information in the healthcare industry. Students have the opportunity to acquire essential skills for accurate and logical communication, and interpretation of medical records. Emphasis is on forming a foundation of a medical vocabulary including; appropriate and accurate meaning, spelling, and pronunciation of medical terms, and abbreviations, signs, and symbols.

### 7165 Emergency Medical Tech

This course is based on the training program developed by the Department of Transportation and the Emergency Medical Services Commission of Indiana. It covers theories, techniques and operational aspects of pre-hospital emergency care within the scope and responsibility of the emergency medical technician (EMT). It requires laboratory practice and clinical observation in a hospital emergency room and ambulance. Successful completion of the course meets national requirements to test for certification as an NREMT.

### *Second-Year Program*

### 7255 Healthcare Specialist Capstone

The capstone course will provide Healthcare students acquire additional knowledge and skills necessary to work in a variety of health care settings beyond a long term care facility, including hospitals, doctor's offices and clinics. Students can accomplish this goal by completing coursework that will cover topics such as Medical Law and Ethics, Electronic Health Records, and/or Behavioral Health. Schools may offer additional healthcare certifications such as the Certified Clinical Medical Assistant or Phlebotomy along with the coursework or in place of the coursework.

### Career Pathway: Barbering and Cosmetology

### First-Year Program

### 7330 Principles of Barbering and Cosmetology

Principles of Cosmetology offers an introduction to cosmetology with emphasis on basic practical skills and theories including roller control, quick styling, shampooing, hair coloring, permanent waving, facials, manicuring, business and personal ethics, and bacteriology and sanitation. Successful completion of the course requires at least 375 Cosmetology studio hours. This course may require extended hours of participation in order to meet the 1500 hours required for the Cosmetology and Barbering exams.

### 7331 <u>Barbering and Cosmetology Fundamentals</u>

Barbering and Cosmetology Fundamentals focuses on the development of practical skills introduced in Principles of Cosmetology. Clinical application and theory in the science of cosmetology are introduced. Successful completion of the course requires at least 375 Cosmetology studio hours. This course may require extended hours of participation to meet the 1500 hours required for the Cosmetology and Barbering exams.

### 7332 <u>Advanced Cosmetology</u>

Advanced Cosmetology will emphasize the development of advanced skills in styling, hair coloring, permanent waving, facials and manicuring. Students will also study anatomy and physiology as it applies to cosmetology. Successful completion of the course requires at least 375 Cosmetology studio hours.

*Second-Year Program*

### 7334 <u>Barbering and Cosmetology Capstone</u> (for second-year students in the graduating class of 2026 and beyond)

Barbering and Cosmetology Capstone builds and improves previously developed skills with an emphasis on developing individual techniques. Professionalism, shop management, psychology in relation to cosmetology, and preparation for state board examinations are stressed. Successful completion of the course requires at least 375 Cosmetology studio hours. This course may require extended hours of participation in order to meet the 1500 hours required for the Cosmetology and Barbering exams.

### <u>Career Pathway: Fire and Rescue</u>

*First-Year Program*

### 7195 <u>Principles of Fire and Rescue</u>

Principles of Fire and Rescue introduces students to the various roles that firefighters and emergency services workers play to protect the public from the loss of life and property. They are frequently the first emergency personnel at the scene of a traffic accident or medical emergency and may be called upon to put out a fire, treat injuries or perform other vital functions. This course will introduce students to the history, terminology, and basic firefighting skills needed for a beginning firefighter. Additionally, students will develop a career plan for a career in public safety; including areas of Fire Science, Homeland Security, and Emergency Medical Services.

### 7189 <u>Fire Fighting Fundamentals</u>

Fire Fighting Fundamentals is for those students who are seeking certification as a firefighter. This course will prepare students for the Hazardous Materials Awareness and Operations certifications and will introduce students to NFPA

1001 which serves as the standard of measurement for all firefighters in North America. Students will learn the knowledge and hands-on practical skills for managing and controlling a hazardous materials incident required for the certifications. Furthermore, students will study how a fire behaves and will learn the basic firefighting skills needed to extinguish a fire while protecting themselves and other firefighters.

**7186 Advanced Fire Fighting**
Advanced Fire Fighting expands upon the principles and techniques of firefighting learned in Fire Fighting Fundamentals. Students will study fire protection systems, firefighter safety and survival. Students will also learn what fire is, the chemical hazards of combustion, and related by-products of fire. Additionally, students will gain a better understanding of fire department organization, administration, operations, and basic strategies and tactics.

*Second-Year Program*

Second-year students in this pathway will complete the three courses outlined in the EMT pathway.

**Career Pathway: Criminal Justice**

*First-Year Program*

**7193 Principles of Criminal Justice**
Principles of Criminal Justice covers the purposes, functions, and history of the three primary parts of the criminal justice system: law enforcement, courts, and corrections. This course further explores the interrelationships and responsibilities of these three primary elements of the criminal justice system.

**7191 Law Enforcement Fundamentals**
Law Enforcement Fundamentals Critically examines the history and nature of the major theoretical perspectives in criminology, and the theories found within those perspectives. Analyzes the research support for such theories and perspectives, and the connections between theory and criminal justice system practice within all the major components of the criminal justice system. Demonstrates the application of specific theories to explain violent and non-violent criminal behavior on both the micro and macro levels of analysis. Additionally, this course will introduce fundamental law enforcement operations and organization. This includes the evolution of law enforcement at federal, state, and local levels.

**7188 Corrections and Cultural Awareness**
  Corrections and Cultural Awareness emphasizes the study of American criminal justice problems and systems in historical and cultural perspectives, as well as discussing social and public policy factors affecting crime. Multidisciplinary and multicultural perspectives are stressed. Additionally, this course takes a further examination of the American correctional system; the study of administration of local, state, and federal correctional agencies. The examination also includes the history and development of correctional policies and practices, criminal sentencing, jails, prisons, alternative sentencing, prisoner rights, rehabilitation, and community corrections including probation and parole. Current philosophies of corrections and the debates surrounding the roles and effectiveness of criminal sentences, institutional procedures, technological developments, and special populations are discussed.

*Second-Year Program*

**7231 Criminal Justice Capstone**
  The Criminal Justice Capstone course allows students to complete additional instruction to earn a postsecondary certificate and should include a work-based learning component such as job shadowing, internship, etc. once the core content is completed. Note that there may be age restrictions on work-based learning components.

**Career Pathway: Automotive Services**

*First-Year Program*

**7213 Principles of Automotive Services**
  This course gives students an overview of the operating and general maintenance systems of the modern automobile. Students will be introduced to the safety and operation of equipment and tools used in the automotive industry. Students will study the maintenance and light repair of automotive systems. Also, this course gives students an overview of the electrical operating systems of the modern automobile. Students will be introduced to the safety and operation of equipment and tools used in the electrical diagnosis and repair in the automotive electrical industry. Students will study the fundamentals of electricity and automotive electronics.

**7205 Brake Systems**
  This course gives students an in-depth study of vehicle electrical systems. Students will study the fundamentals of electricity and automotive electronics in various automotive systems. Additionally, it teaches theory, service and repair of automotive braking systems. This course provides an overview of various mechanical brake systems used on today's automobiles. This course will emphasize professional diagnosis and repair methods for brake systems.

### 7212 <u>Steering and Suspension</u>

This course takes an in-depth look at engine performance, including concepts in the diagnosis and repair of ignition, fuel, emission and related computer networks. This course presents engine theory and operation and studies the various engine designs utilized today. This course also takes an in-depth look at engine performance, including advanced concepts in the diagnosis and repair of ignition, fuel, emission and related computer networks. This course presents engine theory and operation and studies the various engine designs utilized today. Hybrid/Alternative fuel technology will also be introduced.

*Second-Year Program*

### 7375 <u>Automotive Service Capstone</u>

This course further explores important skills and competencies within the Automotive Service Technology Pathway. Topics such as Steering & Suspension, Engine Repair, Climate Control, and Driveline Service. Additionally, Co-Op and Internship opportunities will be available for students. Required Prerequisites: Principles of Automotive Services, Brake Systems, Steering and Suspension.

# CAREER AND TECHNICAL EDUCATION
# WORK BASED LEARNING EXPERIENCES

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

### 5974 <u>Work Based Learning 1</u>
### 5974 <u>Work Based Learning 2</u>

Work Based Learning is a stand-alone course that prepares students for college and career. This strategy builds students' skills and knowledge in their chosen career path. Work Based Learning experiences occur in workplaces (paid experience) and involve an employer assigning a student meaningful job tasks to develop his or her skills, knowledge, and readiness for work. A clear partnership agreement and training plan is developed by the student, teacher, and workplace mentor/supervisor to guide the student's work-based experiences and assist in evaluating achievement and performance. Students have the opportunity to apply the concepts, skills, and dispositions learned in their pathways in real-world business and industry settings.

**0530 <u>Career Exploration Internship 1</u>**
**0530 <u>Career Exploration Internship 2</u>**

The Career Exploration Internship course is an unpaid work experience in the public or private sector that provides for workplace learning in an area of student career interest.  Unlike a Work Based Learning experience in which students gain expertise in a specific occupation, the career exploration internship is intended to expose students to broad aspects of a particular industry or career cluster area by rotating through a variety of work sites or departments. In addition to their workplace learning activities, students participate in 1) regularly scheduled meetings with their classroom teacher, or 2) a regularly scheduled seminar with the teacher to help students make the connection between academic learning and their work-related experiences. A clear internship agreement and training plan are developed by the student, teacher, and internship site mentor/supervisor to guide the student's career exploration experience.

**0530A <u>Applied Career Exploration Internship 1</u>**
**0530A <u>Applied Career Exploration Internship 2</u>**

The Applied Career Exploration Internship course is a paid or unpaid work experience in the public or private sector that provides for workplace learning in an area of student career interest. Unlike a cooperative education program in which students gain expertise in a specific occupation, the career exploration internship is intended to expose students to broad aspects of a particular industry or career cluster area by rotating through a variety of work sites or departments. In addition to their workplace learning activities, students participate in 1) regularly scheduled meetings with their classroom teacher, or 2) a regularly scheduled seminar with the teacher for the purpose of helping students make the connection between academic learning and their work-related experiences. Specific instructional standards tied to the career cluster or pathway and learning objectives for the internship must be written to clarify the expectations of all parties – the student, parent, employer, and instructor.

**0502 <u>Cadet Teaching 1 AM</u>**
**0502 <u>Cadet Teaching 2 PM</u>**

Experience is limited to grades K-5. This course is designed as a field experience for students who are interested in teaching as a profession and are above average in scholarship, citizenship, and attendance. While observing and assisting an experienced teacher, the student gains a better understanding of the role of the teacher and of his/her own aptitude for teaching. Two hours a day are required for the course. Each student must provide needed transportation to the elementary school assignment. Students must submit an application form and be approved by the high school contact person. Students may request an application form from his or her guidance counselor.

# GRADUATION PATHWAYS:
# EMPLOYABILITY SKILLS

## 0547 Project Based Learning

Project-based learning allows students to gain knowledge by working for an extended period of time to investigate and respond to an authentic, engaging and complex question, problem, or challenge. The project is framed by a meaningful problem to solve or a question to answer, at the appropriate level of challenge. Students engage in a rigorous, extended process of asking questions, finding resources, and applying information. Students often make their project work public by explaining, displaying and/or presenting it to people beyond the classroom.
**This course code should be used to denote completion of the Graduation Pathways Employability Skills experience.**

## 0539 Service-Based Learning

Service-based learning integrates meaningful service to enrich and apply academic knowledge, teach civic and personal responsibility (and other employability skills), and strengthen communities.
SBL can be classified by three core indicators:
1.  Integrating academic student with service experience;
2.  Reflecting larger social, economic, and societal issues; and
3.  Collaborative efforts between students, schools, and community partners.
**This course code should be used to denote completion of the Graduation Pathways Employability Skills experience.**

## 0543 Work Based Learning

Work-based learning is a strategy to reinforce academic, technical, and social skills learned in the classroom through collaborative activities with employer partners. Work-based learning experiences allow students to apply classroom theories to practical problems, to explore career options, and pursue personal and professional goals.
WBL includes activities that can occur in workplaces or school-based enterprises and involve an employer assigning a student meaningful job tasks to develop his or her skills, knowledge, and readiness for work. It supports entry or advancement in a career field and can serve as the culminating course or event in a student's chosen career pathway. Through WBL, students have the opportunity to apply the concept, skills, and dispositions learned in previous coursework in real world settings.
**This course code should be used to denote completion of the Graduation Pathways Employability Skills experience.**

# APPENDIX

## MILITARY EXPERIENCE – High School Credits

The local school board shall have the option of recognizing training and experience obtained in the United States Armed Forces in meeting high school graduation requirements, e.g.:

- *Basic Training* - A maximum of four (4) credits may be recognized in the following areas:
  *Physical Education 2 credits*
  *Health & Safety 2 credits*
  For basic training, a maximum of one (1) credit may be granted for each of three months of service.

- *Overseas Instruction* - Credit may be awarded for courses completed through accredited colleges and universities as recommended by the respective colleges and universities, such as the University of Maryland overseas instruction.

- *Service Training School* - Credit may be granted in accordance with recommendations made by the American Council of Education in the publication "Guide to the Evaluation of Educational Experience in the Armed Forces." When the descriptions of service schools are not listed in this guide, appropriate credit recommendations may be obtained by writing to the American Council on Education.

- *Armed Services Institutes* - Credit may be awarded for courses completed in the United States Armed Forces Institute, Marine Corps Institute, and the Coast Guard Institute, provided that the courses shall be validated by terminal examinations as recommended by the American Council on Education. Credit may be awarded in recognition of satisfactory achievement on examinations in established high school courses.