

## **COLLEGE AND CAREER PATHWAYS**

**This information pertains to both the General Diploma and Technical Honors Diploma. These are the State College and Career Pathways, but schools do have flexibility in substituting other College and Career Pathway Courses in the curriculum area to meet the College and Career Pathway requirement. This information is an outline of possible courses, Dual Credit opportunities, and Industry-Based Certifications.**

**College and Career Pathway information in BOLD print is directly available through course offerings at GCHS.** Other listed College and Career Pathway information may be available through various vocational school programs.

### **Please Note:**

*Personal Financial Responsibility and Preparing for College & Careers are foundational Career & Technical Education Courses recommended for every student in every College and Career Pathway.*

### **(1.) AGRICULTURE**

*Foundation Course For All Students In The Agriculture Pathways:*

Introduction to Agriculture Food and Natural Resources

#### **Pathway: Agribusiness**

Introduction to Agriculture Food and Natural Resources

Agribusiness Management

Agriculture Power Structure and Technology

#### **Pathway: Horticulture & Landscape Management**

Horticultural Science

Landscape Management I & II

Plant and Soil Science

#### **Pathway: Life Sciences**

Introduction to Agriculture Food and Natural Resources

Concentration: Animal Science

Animal Science

Advanced Life Science: Animals

Concentration: Food Science

Food Science

Advanced Life Science: Foods

Concentration: Natural Resources

Natural Resources

Sustainable Energy Alternatives

Concentration: Plants & Soils

Plant and Soil Science

Advanced Life Science: Plants and Soils

**Dual Credit Opportunities:**

1. Natural Resources
2. Agribusiness Management
3. Landscape Management I
4. Horticultural Science
5. Animal Science
6. Agriculture Power, Structure, & Technology

**Possible Industry-Based Certification:**

None Available

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**(2.) ARCHITECTURE & CONSTRUCTION**

**Pathway: Construction Trades**

- Introduction to Construction
  - Concentration: Construction
    - Construction Technology I
    - Construction Technology II
  - Concentration: Electrical
    - Construction Technology-Electrical I
    - Construction Technology-Electrical II
  - Concentration: HVAC
    - Construction Technology-HVAC I
    - Construction Technology-HVAC II

**Pathway: Drafting & Design**

- Computers in Design and Production
  - Concentration: Architectural
    - Introduction to Housing and Interior Design
    - Architectural Drafting and Design I
    - Architectural Drafting and Design II
  - Concentration: Mechanical
    - Mechanical Drafting and Design I
    - Mechanical Drafting and Design II

**Dual Credit Opportunities:**

1. PLTW – IED
2. PLTW – CIM
3. PLTW – POE
4. Computers in Design and Production

**Possible Industry-Based Certifications:**

1. Interior Design Fundamentals (Pre-PAC)  
(Intro to Construction I & II; PLTW – IED;  
CADD; Intro to Housing & Interior Design)
  2. AutoCAD Certified User  
(PLTW – IED; CADD; other Tech Ed Courses)
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**(3.) ARTS, AV TECHNOLOGY, AND COMMUNICATIONS**

**Pathway: Web & Digital Communications**

- Introduction to Communications
  - Concentration: Interactive Media
    - Design Fundamentals
    - Computer Illustration & Graphics
    - Interactive Media
    - Web Design

Concentration: Radio TV  
Radio Television I  
Radio Television II

**Pathway: Visual Arts**

Introduction to Design Processes  
Concentration: Visual Communications  
Design Fundamentals  
Computer Illustration & Graphics  
Graphic Design & Layout  
Web Design  
Concentration: Commercial Photography  
Design Fundamentals  
Computer Illustration & Graphics  
Commercial Photography  
Graphic Design & Layout  
Concentration: Fashion, Textiles, & Design  
Introduction to Design Processes  
Introduction to Fashion & Textiles  
Fashion & Textile Career I  
Fashion & Textile Career II

**Dual Credit Opportunities:**

1. Digital Applications & Responsibility II
2. Computer Illustration & Graphics

**Possible Industry-Based Certification:**

1. Microsoft Office Specialist
    - a. Word (DAR I)
    - b. Excel (DAR II)
  2. Fashion, Textiles, & Apparel (Pre-PAC)  
(Intro to Fashion & Textiles I & II)
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**(4.) BUSINESS AND MARKETING**

**Pathway: Business Administration**

*Foundation Courses For All Students In This Pathway:*

Introduction to Business  
Digital Applications & Responsibility I

Concentration: Accounting & Finance  
Accounting  
Business Law and Ethics  
Financial Services

Concentration: Entrepreneurship & Management  
Business Law and Ethics  
Principles of Business Management OR Principles of Marketing  
Business Management Focus  
Advanced Business Management  
Entrepreneurship Focus  
Entrepreneurship and New Ventures

Concentration: Marketing Management  
 Principles of Marketing OR Principles of Business Management  
 Strategic Marketing  
 Marketing in Hospitality & Tourism  
 Sports & Entertainment Marketing Focus  
 Sports and Entertainment Marketing  
 Marketing Focus  
 Fashion & Textiles Electives (such as Intro to Fashion & Textiles)  
 Principles of Marketing  
 Fashion Merchandising

**Dual Credit Opportunities:**

1. Digital Applications & Responsibility II
2. Computer Illustration & Graphics
3. Business Law & Ethics
4. Principles of Business Management
5. Entrepreneurship & New Ventures
6. Principles of Marketing

**Possible Industry-Based Certification:**

1. Microsoft Office Specialist
  - a. Word (DAR I)
  - b. Excel (DAR II)

**(5.) EDUCATION AND TRAINING**

**Pathway: Early Childhood Education**

*Foundation Courses for All Students In This Pathway:*

Child Development  
 Advanced Child Development  
 Interpersonal Relationships

Concentration: Early Childhood  
 Early Childhood Education I  
 Early Childhood Education II  
 Concentration: Education Careers  
 Adult Roles Responsibilities  
 Education Professions I  
 Education Professions II

**Dual Credit Opportunities:**

1. Education Professions I
2. Digital Applications & Responsibility II

**Possible Industry-Based Certification:**

1. Education Fundamentals Certification  
 (Child Development; Advanced Child Development; Education Professions I)
2. Early Childhood Certification  
 (Child Development; Advanced Child Development; Early Childhood Education I)
3. Broad Field Family and Consumer Sciences Certification (Pre-PAC)  
 (Child Development; Nutrition; PCC; other Pathway Courses [Personal Financial Responsibility])

## **(6.) HEALTH SCIENCE**

### **Pathway: Biotechnology**

PLTW – Principles of Biomedical Sciences  
PLTW – Human Body Systems  
PLTW – Medical Interventions  
PLTW – Biomedical Innovations

### **Pathway: Dental**

Dental Careers I  
Dental Careers II  
Interpersonal Relationships  
Nutrition and Wellness

### **Pathway: Health Care Specialties**

Concentration: Health Care Specialties  
Anatomy and Physiology  
Health Science Education I  
Health Science Education II  
Medical Terminology

### **Pathway: Nursing**

Anatomy and Physiology  
Health Science Education I  
Health Science Education II  
Human Development and Wellness  
Medical Terminology

### **Dual Credit Opportunities:**

1. Anatomy & Physiology
2. Digital Applications & Responsibilities II

### **Possible Industry-Based Certification:**

None Available

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## **(7.) HOSPITALITY & HUMAN SERVICES**

*Foundation Course for All Hospitality and Human Services Students:*

Introduction to Business

### **Pathway: Cosmetology**

Cosmetology I  
Cosmetology II

*Foundation Courses For All Students in Culinary and Hospitality Pathways:*

Nutrition and Wellness  
Advanced Nutrition and Wellness  
Introduction to Culinary Arts and Hospitality  
Interpersonal Relationships

### **Pathway: Culinary Arts**

Culinary Arts and Hospitality Management  
Advanced Culinary Arts

Pathway: Hospitality Management

Culinary Arts and Hospitality Management  
Advanced Hospitality Management

**Pathway: Human and Social Services**

Human and Social Services I  
Human and Social Services II  
Human Development and Wellness

**Dual Credit Opportunities:**

None Available

**Possible Industry-Based Certification:**

1. Nutrition Food & Wellness (Pre-PAC)  
(Nutrition & Wellness; Advanced Nutrition & Wellness; Preparing for College & Careers; Health & Wellness)
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**(8.) INFORMATION & TECHNOLOGY**

Pathway: Programming

Digital Applications & Responsibility I & II  
Computer Programming I  
Computer Programming II

**Pathway: PC Networking & Support**

Digital Applications & Responsibilities I & II  
Computer Tech Support  
    Concentration: Networking  
        Infrastructure of the Internet  
    Concentration: PC Support  
        Networking Fundamentals

**Dual Credit Opportunities:**

1. Digital Applications & Responsibilities II
2. Computer Illustration & Graphics
3. Computer Tech Support I & II

**Possible Industry-Based Certification:**

1. Microsoft Office Specialist
    - a. Word (DAR I)
    - b. Excel (DAR II)
  2. A+ Certification
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**(9.) MANUFACTURING**

**Pathway: Advanced Manufacturing**

Intro to Manufacturing I & II OR Intro Adv. Manufacturing & Logistics I & II  
Advanced Manufacturing I  
Advanced Manufacturing II

Pathway: Electronics

Intro to Manufacturing I & II OR Intro Adv. Manufacturing & Logistics I & II  
Computers in Design and Production  
Electronics and Computer Technology I  
Electronics and Computer Technology II

**Pathway: Machine Technology**

Introduction to Manufacturing I & II OR Introduction to Advanced Manufacturing and Logistics I & II  
Computers in Design and Production  
Precision Machining I  
Precision Machining II

**Pathway: Welding**

Introduction to Manufacturing I & II OR Introduction to Advanced Manufacturing and Logistics I & II  
Computer in Design and Production  
Ivy Tech – WELD 100 Welding Processes  
Ivy Tech – WELD 108 Shielded Metal Arc Welding I and WELD 206 Shielded Metal Arc Welding II  
Welding Technology I  
Welding Technology II

**Pathway: Logistics & Supply Chain Management**

Introduction to Advanced Manufacturing and Logistics I & II  
Computers in Design and Production  
Supply Chain Management and Logistics  
Warehouse Operations Materials Handling

**Dual Credit Opportunities:**

1. PLTW – CIM
2. Computers in Design and Production
3. Intro to Advanced Manufacturing & Logistics I & II
4. Advanced Manufacturing I

**Possible Industry-Based Certification:**

1. AutoCAD Certified User (PLTW – IED; CADD)
  2. Welding Certifications
  3. PLTW = 3 engineering courses (End of Course Assessment Bundle)
  4. MSSC = Safety
  5. MSSC = Production
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**(10.) PUBLIC SAFETY**

**Pathway: Criminal Justice**

Criminal Justice I  
Criminal Justice II  
Interpersonal Relationships

**Pathway: EMT/Paramedic**

Emergency Medical Services  
Health Science Education I  
Human Development and Wellness

**Pathway: Fire and Rescue**

Fire and Rescue I  
Fire and Rescue II  
Interpersonal Relationships

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**(11.) STEM – SCIENCE, TECHNOLOGY, ENGINEERING, & MATH**

**Pathway: Engineering**

Introduction to Engineering Design  
Principles of Engineering

At Least One of the Following:

- Aerospace Engineering OR Aerospace Engineering (non-PLTW)
- Biotechnical Engineering OR Biotechnical Engineering (non-PLTW)
- Civil Engineering & Architecture OR Civil Engineering & Architecture (non-PLTW)
- Computer Integrated Manufacturing OR Computer Integrated Manufacturing (non-PLTW)
- Digital Electronics OR Digital Electronics (non-PLTW)
- Capstone (Recommended)  
Engineering Design and Development

**Pathway: Engineering Technology**

- Introduction to Engineering Design PLTW
- Principles of Engineering PLTW
- Purdue Polytechnic Columbus: TECH 120 Design Thinking in Technology
- Purdue Polytechnic Columbus: TLI 112 Foundations of Organizational Leadership

**Additional Pathways to be developed**

**Dual Credit Opportunities:**

1. PLTW – IED
2. PLTW – CIM
3. PLTW – POE
4. TECH 120
5. TLI 112

**Possible Industry-Based Certification:**

1. AutoCAD Certified User  
(PLTW – IED; CADD)
2. PLTW = 3 engineering courses  
(End of Course Assessment Bundle)

**(12.) TRANSPORTATION**

**Pathway: Automotive Collision Repair**

- Introduction to Transportation
- Automotive Collision Repair Technology I
- Automotive Collision Repair Technology II

**Pathway: Automotive Technology**

- Introduction to Transportation
- Automotive Services Technology I
- Automotive Services Technology II

**Pathway: Aviation**

- Introduction to Transportation
- Introduction to Engineering Design
- Aerospace Engineering
- Aviation Flight
- Aviation Maintenance
- Aviation Operations

**Pathway: Diesel Service Technology**

- Introduction to Transportation
- Diesel Services Technology I
- Diesel Service Technology II