|  |  |
| --- | --- |
| Course Name | Introduction to Architecture & Construction |
| **Course Number** | VT203/204 (17006) |
| **Teacher** | Mr. Tyler Wuebben |
| **Term:** | Semester or Year |
| **Grade Level:** | 9-12 |
| **Grading Scale** | GVHS Standard Scale |
| **Weighting** | 1.00 |

**Course Description**:

This course will meet the student’s individual needs by examining related curriculum used to fabricate wood products.

*Topics covered:*

* Safety
* Wood identification
* Project Assembly
* Equipment
* Math and Reading skills
* Proper terms and definitions

**Pre-requisites:** None

**Teacher Expectations**: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 70%.

**Materials and Equipment Needed:** Provided by school district

**Fees:** None

|  |  |
| --- | --- |
| Course Name | Introduction to Building Trades |
| **Course Number** | VT251/252 (17002) |
| **Teacher** | Mr. Tyler Wuebben |
| **Term:** | Semester or Year |
| **Grade Level:** | 10-12 |
| **Grading Scale** | GVHS Standard Scale |
| **Weighting** | 1.00 |

**Course Description**:

Students will gain insight into the career of building trades by experiencing the practical skills needed to succeed in the construction industry.

*Topics Covered:*

* Industry safety procedures
* Math Skills
* Hand, power, and pneumatic tools
* Blueprint reading and survey techniques
* Construction project
* Plumbing applications
* Electrical wiring applications
* Concrete construction applications
* Drafting design concepts
* Career Exploration

**Pre-requisites:** Introduction to Architecture and Construction

**Teacher Expectations**: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 70%.

**Materials and Equipment Needed:**

**Fees:** None

|  |  |
| --- | --- |
| Course Name | Residential Construction |
| **Course Number** | VT301/302 (17003) |
| **Teacher** | Mr. Tyler Wuebben |
| **Term:** | Semester or Year |
| **Grade Level:** | 11-12 |
| **Grading Scale** | GVHS Standard Scale |
| **Weighting** | 1.00 |

***Course Description:***

Students will gain in depth knowledge of residential construction by learning the National Center for Construction Education & Research (NCCER) competencies/objectives, (Examples are NCCER tasks that the student may complete some or all of).

*Topics Covered****:***

* Industry safety procedures
* Math skills
* Blue print reading & basic survey techniques
* Wood building materials, fasteners, and adhesives
* Hand, power, and pneumatic tools
* Concrete construction applications
* Framing of flooring systems, walls & ceilings, & roofing systems
* Installation of windows and exterior doors
* Exterior finishing
* Roofing application
* Thermal and moisture protection
* Drywall installation and finishing
* Interior finish work
* Cabinet Installation
* Stairs
* Basic residential electric and plumbing
* Career exploration

**Pre-requisites:** Intro. To Building Trades

**Teacher Expectations**: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 70%.

**Materials and Equipment Needed:** Provided by school district

**Fees:** None

|  |  |
| --- | --- |
| Course Name | Introduction to Manufacturing |
| **Course Number** | VT401 (13002) |
| **Teacher** | Mr. Tyler Wuebben |
| **Term:** | Semester |
| **Grade Level:** | 10-12 |
| **Grading Scale** | GVHS Standard Scale |
| **Weighting** | 1.00 |

**Course Description:**

This course will provide entry level exposure and career exploration in the Manufacturing industry. Students will be exposed to small business skills, manufacturing and engineering products, production systems, manufacturing and marketing of products, and performing financial activities.

*Topics Covered*:

• Career Exploration   
• Manufacturing Business Process   
• Manufacturing Technology Safety Practices   
• Health and Environmental Practices   
• Basic Tools & Equipment used in the Manufacturing Industry   
• Manufacturing Technology Basics   
• Product Development

**Pre-requisites:** None

**Teacher Expectations**: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 68%.

**Materials and Equipment Needed:**

**Fees:** None

|  |  |
| --- | --- |
| Course Name | Machine Tool Technology |
| **Course Number** | VT221 (13203) |
| **Teacher** | Mr. Tyler Wuebben |
| **Term:** | Semester |
| **Grade Level:** | 10-12 |
| **Grading Scale** | GVHS Standard Scale |
| **Weighting** | 1.00 |

**Course Description**:   
There is a high demand for motivated and creative individuals in the machining field. The desire for the students to succeed at the basic level and step up to the higher level of competency in this field is the ultimate goal of this course.

*Topics Covered:*   
• Create Various Projects using machining theory   
• Blueprints   
• Measuring instruments   
• Applied mathematical concepts   
• CAD/CAM software   
• Explore Career Possibilities

**Pre-requisites:** Introduction to Manufacturing

**Teacher Expectations**: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 68%.

**Materials and Equipment Needed:**

**Fees:** None

|  |  |
| --- | --- |
| Course Name | Welding Technology |
| **Course Number** | VT231 (13207) |
| **Teacher** | Mr. Tyler Wuebben |
| **Term:** | Semester |
| **Grade Level:** | 10-12 |
| **Grading Scale** | GVHS Standard Scale |
| **Weighting** | 1.00 |

**Course Description:**There is a high demand for motivated and creative individuals in the welding field. The desire for the students to succeed at the basic level and step up to the higher level of competency in this field is the ultimate goal of this course.

*Topics Covered:*   
• Welding safety   
• Technical specifications   
• Oxyfuel cutting   
• Preparing base metals   
• Shielded Metal Arc Welding (SMAW)   
• Career Exploration

**Pre-requisites:** None

**Teacher Expectations**: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 68%.

**Materials and Equipment Needed:**

**Fees:** None

|  |  |
| --- | --- |
| Course Name | Advanced Welding |
| **Course Number** | VT232 (13208) |
| **Teacher** | Mr. Tyler Wuebben |
| **Term:** | Semester |
| **Grade Level:** | 10-12 |
| **Grading Scale** | GVHS Standard Scale |
| **Weighting** | 1.00 |

**Course Description**:

There is a high demand for motivated and creative individuals in the welding field. The desire for the students to succeed at the basic level and step up to the higher level of competency in this field is the ultimate goal of this course. Students will learn more advanced techniques and skills related to welding applications. Welding skills will be developed in the context of a series of projects. This course will help prepare the student for the entry level welding certification.

***Topics Covered:***

* Safety
* Interpret drawings
* Base Metal Prep
* Gas Metal Arc Welding (GMAW)
* Gas Tungsten Arc Welding (GTAW)
* Welding Quality
* Career Exploration

**Pre-requisites:** Welding Technology

**Teacher Expectations**: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 68%.

**Materials and Equipment Needed:**

**Fees:** None

|  |  |
| --- | --- |
| Course Name | Introduction to Technology Education |
| **Course Number** | VT101/102 (21051) |
| **Teacher** | Mr. Tyler Wuebben |
| **Term:** | Semester or Year |
| **Grade Level:** | 10-12 |
| **Grading Scale** | GVHS Standard Scale |
| **Weighting** | 1.0 |

**Course Description:**

Introduction to Technology Education is a significant part of society. Most careers call for some type of technology skills. Technology education brings deeper meaning to core content concepts while introducing students to various technologies, technical skills, critical thinking processes, and hands-on experiences. Students will become technologically literate problem solvers and creative thinkers.

Topics Covered:

* Nature of Technology
* Technology & Society
* Design Process
* Energy & Power
* Transportation
* Manufacturing & Construction
* Communications

**Pre-requisites:** Introduction to Architecture and Construction

**Teacher Expectations**: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 70%.

**Materials and Equipment Needed:** Provided by the school district

**Fees:** None

|  |  |
| --- | --- |
| Course Name | Introduction to Vehicle Systems & Maintenance |
| **Course Number** | VT201/202 (20106) |
| **Teacher** | Mr. Tyler Wuebben |
| **Term:** | Semester or Year |
| **Grade Level:** | 9-12 |
| **Grading Scale** | GVHS Standard Scale |
| **Weighting** | 1.0 |

**Course Description:**   
There is a high demand for vehicle maintenance, service and repair, sales and support staff. With the increasing complexity if the modern transportation there is also a high demand for understanding of basic operating principle of today’s systems of operation. Introduction to vehicle systems and maintenance gives students the opportunity to explore these principles.

*Topics Covered:*

* Safety related to transportation systems and maintenance
* Proper application and maintenance of tools and equipment
* Principles of chemical, mechanical, and physical functions of modern vehicle systems
* Document maintenance procedures
* Appropriate business practices
* Vehicle service and repairs
* Principles and operations of electrical systems
* Principles of automotive brakes, steering, suspension and automatic and manual transmission systems
* Career opportunities in TDL

**Pre-requisites:** None

**Teacher Expectations**: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 70%.

**Materials and Equipment Needed:** Provided by the school district

**Fees:** None

|  |  |
| --- | --- |
| Course Name | ATV/Small Engine Mechanics |
| **Course Number** | VT303 (20109) |
| **Teacher** | Mr. Tyler Wuebben |
| **Term:** | Semester |
| **Grade Level:** | 9-12 |
| **Grading Scale** | GVHS Standard Scale |
| **Weighting** | 1.0 |

**Course Description:**

There is a high demand for trained individuals in the small engine ATV service field. The desire for the students to receive industry based training at the basic level and step up to the higher level of competency in this field is the ultimate goal of this course. Completions of this course will aide students as they continue their education at the post-secondary level or in the workforce.

*Topics Covered:*

• Safety

• Administrative functions

• Communication, mathematics, & science

• Diagnostic procedures

• Electrical systems

• Ignition systems

• Fuel delivery systems

• Emission systems

**Pre-requisites:** None

**Teacher Expectations**: Students will be expected to meet all the course goals by demonstrating their understanding of the basic concepts of each topic area. In order to pass the course students will need a minimum of 70%.

**Materials and Equipment Needed:** Provided by the school district

**Fees:** None