**Course Name**

**East Ridge High School**

**2017 - 2018**

**Instructor: Name: Jack Noblit**

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 **Available after school: by Appointments only. Confirm date and time before appointment.**

**\*Asterisk denotes teacher’s preferred way of communication.**

**Course Description**

 Mechanical, Electrical, & Plumbing Systems prepares students for electrical, plumbing, and HVAC careers by introducing students to the physical principles of these systems and the fundamental skills needed to work with them. Upon completion of this course, proficient students will be able to follow safety procedures and use tools to perform basic operations with electrical circuits, as well as demonstrate understanding in fundamental concepts of electricity theory (i.e. Ohm’s Law). Students will be able to apply proper tools and procedures to perform basic operations with plastic piping, including measuring, cutting, and joining pipe. Furthermore, students will be able to apply mathematics concepts to solve HVAC, electrical, and plumbing problems. Standards in this course also include principles of the construction industry and business and project management. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study.

**Course Policies**

Safety will be the paramount goal of the course and class rules reflect that goal. The classroom is also the shop so rules apply to both situations. Make-up work will be granted on the instructor’s discretion on paper work, but will not be granted for hands-on work.

**Assessments and Grading**

Tests will be multiple choice and true/false

Daily grades will given on hands-on work days based on participation

Design and build project

Your grade will be calculated as shown below:

Grading formula for each 9-week’s grade:

· Teaching tasks other than tests 60%

Daily assignments and measuring assignments

·Research paper (2nd 9 weeks only) 20%

 Assessments and Tests 20%

**Grade Calculations for high school courses without a state-level test:**

· 1st Nine Weeks – 40%

· 2nd Nine Weeks – 40%

· Exam – 20%

**Course Topics and Schedule by Semester**

|  |  |  |  |
| --- | --- | --- | --- |
| **Week** | **Semester 1** | **Topic** | **UbD** |
| 1 |   |  Safety |   |
| 2 |   |   |   |
| 3 |   |   |   |
| 4 |   |  Tools and equipment |   |
| 5 |   |   |   |
| 6 |   |   |   |
| 7 |   |  Career exploration, construction industry principles |   |
| 8 |   |  Construction math |   |
| 9 |  **(End of 1st quarter)** |  |  |
|   |   | **Fall Break** |  |
| 10 |   |  Electrical systems |   |
| 11 |   |  Plumbing Systems |   |
| 12 |   |   |   |
| 13 |   |  Piping |   |
| 14 |   |   |   |
| 15 |  (Thanksgiving) |  Heating, Ventilation, and Air Conditioning Systems (HVAC) |   |
| 16 |   | Construction Drawings & Specifications |   |
| 17 |   |  Business and Project Management |   |
| 18 |  **(End of Semester 1)** |   |   |
|   |  |   |   |

|  |  |  |  |
| --- | --- | --- | --- |
| **Week** | **Semester 2** | **Topic** | **UbD** |
| 1 |   | Safety |   |
| 2 |   |   |   |
| 3 |   |   |   |
| 4 |   | Tools and equipment |   |
| 5 |   |   |   |
| 6 |   |   |   |
| 7 |   | Career exploration, construction industry principles |   |
| 8 |   | Construction math |   |
| 9 |   |   |   |
| 10 |   | Electrical systems  |   |
| 11 |  **(End of 3rd quarter)** |  Plumbing Systems |   |
|   | **March** | **Spring Break** |  |
| 12 |   |   |   |
| 13 |   |  Piping |  |
| 14 |   |   |   |
| 15 |   |  Heating, Ventilation, and Air Conditioning Systems (HVAC) |   |
| 16 |   |  Construction Drawings & Specifications |   |
| 17 |   |  Business and Project Management |   |
| 18 |   |   |   |
| 19 |   |   |   |
| 20 | **May 22-26 (End of 4th quarter)** |   |   |
|   |  |   |   |