

Principles of Manufacturing
Barry Huffhines
Huffhinesb@cocke.k12.tn.us

Course Description- The Principles of Manufacturing course introduces you to different careers in advanced manufacturing, like working with machines, robotics (mechatronics), welding, and industrial maintenance. You'll learn about how things are made in factories, from start to finish, and what it takes to work well on a team in that environment. In this course, you'll:

1. Explore different jobs in manufacturing.
2. Learn to read blueprints and work with systems
3. Understand how to check for quality
4. Study how design, engineering, and materials all come together in the manufacturing process

By the end, you'll have a good idea of what part of manufacturing interests you most and which path you might want to study further. See standards at the link below.

- State standards

INSTRUCTION:

Safety Training and Test- We will cover the basic safety procedures you will need to operate the tools used in this class.

Overview of manufacturing- We will define manufacturing, identify 5 general steps of manufacturing, and explain the operation of a manufacturing system.

Materials- Identify and describe a wide range of materials used in manufacturing.

Career Exploration- Identify and describe the various career opportunities of manufacturing.

Layout and Measurement- We will learn to use proper tools and read measurement and layouts.

Blueprint Reading and Interpretation- We will learn how to read schematics, blue prints, or written specifications.

Materials Needed- Paper, pencil, proper clothing, great attitudes, and willing to learn. Tools and Machinery will be provided.

Safety Procedures- No one is to touch any tools or machinery without instructors permission. Proper PPE must be worn at all times in the shop. Follow all classroom procedures and safety rules.

Grading Scale:

Daily Assignment-10% Professionalism-20% Quizzes-20% Test-20% Projects-30%= 100%

Make-Up Work Policy/Late Work Policy - All Make up work will be required one week from the day missed. Disciplinary actions will be considered for grade in professionalism.

GENERAL EXPECTATIONS: Come to class prepared, ready to learn, and with a great attitude. Students:

Attendance Policy-Students are expected to attend class regularly, be respectful to other students, teachers, or visitors.

Classroom Policy/Procedures-Daily Instructions:

1. When students arrive at the classroom, find the attendance sheet and clock in. 1-2 minutes
2. After clocking in, find your assigned seat for the safety meeting. 1-2 minutes

3. Have safety meetings and find daily tasks. This time will be allotted to determine if you are in the shop or the classroom. The instructor will assign team leaders to be in charge of getting equipment or materials needed to complete daily tasks. 2-5 minutes
 4. Complete daily tasks instructed by the teacher. 15-30 minutes
 5. After completion, have the assignment checked and signed off on by instructor. 1-2 minutes
 6. Clean up the work area and return to the assigned classroom seat. 3-5 minutes
 7. Follow further steps or details from instructor. 1-2
 8. Wait at the assigned seat for the bell to dismiss.
 - All Cell Phones will remain in students' backpacks. All backpacks will remain in the classroom.
 - Clean up areas and procedures will be assigned weekly.
 - Each student will be permitted 5 hallway visits throughout the semester. (bathroom, office visits, guidance, etc.) Use the restrooms before class between switching time, 7 minutes between classes. Being called out by the office does not take away from your 5.
 - Be respectful to students, teachers, and any visitor to our classroom.
 - Students' shop time can and will be determined on classroom behavior.
- Communication Strategy: 8am-3:30pm after hours by appointment /huffhinesb@cocke.k12.tn.us

Plagiarism:

According to Harbrace Handbook, 15th edition:

1. Plagiarism is defined as “presenting someone else’s ideas, research, or opinions as your own without proper documentation, even if it has been rephrased.”
 2. This includes but not limited to:
 - Copying verbatim all or part of another’s written work
 - Using phrase, figures, or illustrations without citing the source
 - Paraphrasing ideas, conclusions, or research without citing source
 - Using all or part of a literary plot, poem, or film without attributing the work to its creator.
 - Using AI generated programs to do assignments. (see board policy)
 - Papers, projects, or assignments written by AI. (see Board Policy)
3. Consequences of Plagiarism:
- Plagiarism is a form of stealing and academic fraud. Students who are found guilty of plagiarism have the option of either redoing the assignment within a specified time period and accept a letter drop or taking a zero on the assignment. Parents are to be involved in making the decision.

Religion in the Classroom:

The board affirms that it is essential that the teaching about religion- and not of a religion be conducted in a factual, objective, and respectful manner in accordance with the following guidelines.

- Educational content which consists of religious themes shall be presented in a factual, objective, and respectful manner in accordance with the following guidelines:
- 1. Religious themes may be a part of the curriculum for school-sponsored activities and programs provided it is essential to the learning experience in the various fields of study and is presented objectively;
- 2. The inclusion of religion shall be for educational purposes only;1
- 3. The emphasis on religious themes should be only as extensive as necessary for a balanced and comprehensive study of the curriculum. Such studies shall never be used to proselytize, establish, foster, or demean any particular religion, religious tenets, or beliefs; and1
- 4. Student-initiated expressions to questions or assignments which reflect their beliefs or non-beliefs about a religious theme shall be accommodated.

Several safety and demonstration videos. OSHA, LOTO, NEC Industry certifications.

<https://www.youtube.com/watch?v=V-9SXMAR86o>

<https://www.youtube.com/watch?v=fkPwiT6KbBk>

<https://www.youtube.com/watch?v=-W8BBYs6gLS>

<https://www.youtube.com/watch?v=Nk6d4SbwmOY>