



PRINCIPLES OF MANUFACTURING

Instructor Information: Travis Sane

Cosby High School

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Course Description: Principles of Manufacturing is designed to provide students with exposure to various occupations and pathways in the Advanced Manufacturing career cluster, such as Machining Technology, Industrial Maintenance Technology, Mechatronics, and Welding. In order to gain a holistic view of the advanced manufacturing industry, students will complete all core standards, as well as standards in two focus areas. Throughout the course, they will develop an understanding of the general steps involved in the manufacturing process and master the essential skills to be an effective team member in a manufacturing production setting. Course content covers basic quality principles and processes, blueprints and schematics, and systems. Upon completion of this course, proficient students will advance from this course with a nuanced understanding of how manufacturing combines design and engineering, materials science, process technology, and quality. Upon completion of the Principles of Manufacturing course, students will be prepared to make an informed decision regarding which Advanced Manufacturing program of study to pursue. Course is 1 full semester.

Hyperlink to local curriculum, state standards, and/or competencies

[cte_std_principles_manufacturing.pdf \(tn.gov\)](#)

Course Content: Course content covers basic quality principles and processes, blueprints and schematics, and systems. Content will also come from academic classes such as Algebra I, Geometry, and Physical Science. Students will work in teams to learn teamwork, students will work individually to focus on problem solving, and how to work in a safe and productive manner to understand productivity.

Major Assignments: In order for students to show competency with course material, students will be asked to complete a course project, as well as classwork (both group and individual), lab work, and reading and writing assignments.

Grading scale:

In Class work = 10%

100 - 90 = A

Lab work = 30%

89 - 80 = B

Test = 50%

79 - 70 = C

Class Participation = 10%

69 - 60 = D

59 - 0 = F

Goals and objectives:

- Develop good habits, attitudes, judgements, and the ability to participate with other students in a work environment
- Create an understanding for the importance of the manufacturing industry in its entirety
- Create a desire in students to seek additional skills and knowledge that can be used throughout their entire career
- Develop student comprehension of science and mathematics content through application in manufacturing

Materials:

- Chromebook
- Writing utensil / Pen (blue or black ink)
- Notebook / Binder

Late Work: Students will have 2 days to turn in all late work after the 2nd day student will receive a 0 or incomplete for the assignment. If a student misses my class it will be their responsibility to ask for the miss or make-up work.

Class Rules :

- ALWAYS BE SAFE AND WORK IN A SAFE MANNER
- ALWAYS WEAR YOUR APPROPRIATE PPE
- ALWAYS BE RESPECTFUL TO OTHER STUDENTS
- NO FOUL LANGUAGE
- NO CELL PHONES / EARBUDS OUT DURING CLASS
- NO NICOTINE (TOBACCO, CIGARETTES, VAPES, ETC)
- NO TALKING WHEN SOMEONE ELSE HAS THE FLOOR
- ALWAYS LISTEN
- ALWAYS BRING ALL MATERIAL TO CLASS
- BE ON TIME IN SEAT AND READY TO LEARN
- NO FOOD OR DRINK IN CLASSROOM (EXCEPT WATER)
- **RESPECT THE TOOLS / SUPPLIES THEY ARE NOT YOURS**

Student Signature _____

Date: _____

Parent Signature _____

Date: _____