

# Principles of Manufacturing 2019 - 2020

## Course Information:

This course is project-based course designed to provide the student with knowledge, skill, and a technology background in order for them to pursue craft, technology training, community college and apprenticeships, or college and university; and to prepare the student for workforce readiness. Emphasis will be placed on basic skills, safety, techniques, and project applications that apply to the manufacturing industry. This course is the prerequisite for the welding 1 class.

## Teacher Information:

Instructors: Joe Chambers, Tim Sherwood

Joe Chambers - [josephchambers@misdmail.org](mailto:josephchambers@misdmail.org)

Tim Sherwood - [timothysherwood@misdmail.org](mailto:timothysherwood@misdmail.org)

## Text, Readings, Materials:

Welding Principles and Applications Textbook, Metal Fabrication Textbook, Google Classroom, AWS SENSE Curriculum, Google Drive.

## Required Materials:

Clothing - Jeans (no holes or frayed edges), Long Sleeve Cotton Shirt, and Boots (can be steel toe). **Bring in by January 27th.**

Technology - We will be using technology with internet capability every day for coursework and online curriculum. If you do not bring it, you will not be able to complete assignments for class.

## Course Calendar/Schedule:

Safety instruction will be on-going throughout the semester. This is a tentative schedule that is intended to be flexible and is subject to change depending on needs of students and progressions during the semester.

**Week 1: Introductions, team building activities, classroom rules, procedures, and expectations, what is manufacturing, use of technology in this class, and career goals and employability.**

**Week 2: History of Manufacturing, Technological Systems, Problem Solving**

**Week 3: Intro to Shop Math, Measurement**

**Week 4: Creating and Reading Working Drawings**

**Week 5 & 6: Safety and Standards**

**Week 7: Cutting Process**

**Week 8: Welding Basics**

**Week 9: Machining Operations**

**Week 10, 11: Manufacture 1<sup>st</sup> Project**

**Week 12 & 13: Design and Manufacture Individual Project**

**Week 14: Manufacturing and Marketing for Mass Production**

**Week 15: Maintenance and Preventive Maintenance**

**Week 16: Career Exploration**

**During this 18 weeks course we will cover basic safety, tool use and identification, job skills, careers in manufacturing, measurement, how to read and draw detail schematics, manufacturing processes such as welding, machining, product design, production, and product marketing.**

**Certifications:**

There are NO certifications offered at the end of the introductory course. This course leads into others that will offer certifications such as the 10-Hr OSHA certification and AWS Weld Certifications.

**Grading Policy:**

Major Grades - 40% (tests, projects, lengthy assignments, etc...)

Daily Work - 60%

First Six Weeks = 26%    Second Six Weeks = 27%    Third Six Weeks = 27%

Semester Exam = 20%

<b>A</b>	<b>90-100</b>
<b>B</b>	<b>80-89</b>
<b>C</b>	<b>70-79</b>
<b>F</b>	<b>Below 70</b>

**Clubs:**

Students are encouraged to join and participate in afterschool activities such as the Skills USA Welding Club, Ben Barber Welding Club, FFA, and etc.

**Class Rules:**

All regulations found in the Students Technology Use Guidelines, Maintaining a Healthy, Active LAN, and Classroom Management Plan will be in place at all times. Students will not be allowed usage of any computer in the lab without parent/guardian signature on these documents and on file with the instructor.

The student may make arrangements to come before school, during break times, or after school to do make-up work per the MISD policy as stated within the Student Handbook as long as it is pre-arranged with the instructor. It must be noted that the

student is responsible for making these arrangements within the scope and time allowed - not the teacher.

**Late work-**

- Teacher designates due date and time for assignment (Beginning of class period, End of class period, designated time of day)
- If student fails to meet the due date and time, then the student has till the next class period (next A day or B day) to turn in assignment to be considered one day late.
- Students will be assessed a penalty of 30% points for up to one class period late.
- Score of a zero may be given for work turned in after one day late.

**Tardiness:** Any Tardy to class will be treated per student handbook and regulations. If a Student is tardy 15 minutes after class is scheduled to start or re-start, they will be counted as absent. Any missed exams or assignments will be treaded according to the MISD Policy.

**Academic Dishonesty - cheating or plagiarism - is not acceptable.** Cheating includes the copying of another student's work - homework, class work, test answers, projects, etc - as one's own. Plagiarism is the use of another person's original ideas or writing without giving credit to the true author. A student found to have engaged in academic dishonesty will be subject to loss of credit for the work in question, as well as disciplinary penalties, according to the Student Code of Conduct.

**Work Clothes - Students are required to have proper work wear when we are going into the welding lab.** We will not need these clothes every day and the instructor will give notice before any activities are done in the lab. Students must have closed toed shoes (preferably leather boots), long denim pants (without holes or frays), and a long sleeve 100% cotton shirt. Students will be provided one pair of safety glasses if they lose or break them, the student is responsible for buying another pair or they will not be able to work in the lab and will be given zeros for all lab activities until they are replaced. Students must wear ear protection in the lab when work is being done. Students will be given a pair of reusable ear plugs or ear muff to use during class.

**I look forward to having you (or your student) as a student and working with you for your success in this course.**

**Sincerely,  
Joe Chambers**

**X**

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Parent

**X**

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Student