

Manufacturing

Hempstead High School

Instructor: Mr. David Corbin

dcorbin@dbqschools.org

Course Description:

Manufacturing is a one-semester course that is activity oriented and focuses on the processes that are utilized within industry. Students will have the opportunity to develop skills and knowledge in the shaping of metal and plastic parts. Emphasis is placed on basic precision machining operations including the use of Lathes, Mills, Drill Presses, and Grinders. Instruction includes the use and care of other precision tools such as micrometers, indicators, combination squares, scales, and calipers. Application of mathematical skills and blue print reading is part of the daily experience.

Standards:

This course is designed in alignment with the Iowa Core Curriculum 21st century technological literacy skills, as well as the ITEA Standards for Technological Literacy.

What Are We Going To Do In This Class?

<p>Manufacturing Systems</p> <p>Machine Shop Safety</p> <ul style="list-style-type: none">✚ Personal Protection Equipment, Shop hazards, Lock out/Tag out procedures. <p>Hand Tools</p> <ul style="list-style-type: none">✚ Files, Taps, Dies, wrenches, etc. <p>Machine Setup & Operation</p> <ul style="list-style-type: none">✚ Lathes, Vertical Mills, Saws, Drilling Operations, etc.	<p>Blueprint Reading</p> <p>Part Layout</p> <p>Dimensional Measurements</p> <ul style="list-style-type: none">✚ Digital calipers, Micrometers, Height gauges. <p>Speeds and Feeds for Machining</p> <p>Grinding & Abrasive Processes</p> <p>Automation in Manufacturing</p>
--	---

Supplies/Course Expenses:

**Students are responsible for always bringing a pencil/pen and safety glasses to class!
You will not be allowed to work if you do not have safety glasses.**

Metal/Plastic- Students will complete several projects within the class. The Metal and Plastic for these projects will be covered by the instructor.

Safety Glasses- Each student is required to wear safety glasses while present in the lab, or if any other person is running a machine in the lab area. This means that if I am giving a demonstration, or if the student falls behind on bookwork and must remain in the classroom portion of the lab facility, they must still wear their glasses while other students or the instructor are working.

Instructional Strategies:

The instructor of this course will use a variety of instructional strategies to deliver the appropriate materials in a manner to inform all students. These strategies will include: direct instruction, active participation, presentation/demonstration, questioning, student projects, and just-in-time instruction.

Assessments:

Summative- This will be in the form of a series of projects that are manufactured with a variety of equipment throughout the semester. Students will be made aware of the due dates, and detailed expectations that they will be graded on.

Quizzes- Students will have to pass a safety quiz for each of the machines that they will be operating in the class. A student is only considered to have passed the quiz if they score 100%, however, the score they receive on the FIRST ATTEMPT of the safety quiz will be the score that goes into the gradebook.

Formative- I will ask students guiding questions, along with close observation of their activities in the lab in order to assess the development of their skills. This will also be the way that I assess their safety practices and lab maintenance participation. Student will be given weekly work points based on their safety skills and contribution to lab cleanup.

Grading:

Projects- This will be the majority of the student's grade. Students will be graded on several projects that will be completed throughout the semester. These items will be evaluated based on a set of criteria that will be handed out prior to the start of each project.

Quizzes- Students will complete a series of safety quizzes for each of the machines that they will operate in the lab for which they will receive a grade based on their ability to choose the appropriate answer for each safety situation/question. All safety quizzes must be passed with a 100% accuracy to ensure that the student understand how to operate the equipment safely.

Worksheets- Students will complete a series of worksheets in class in order to broaden their knowledge on manufacturing techniques, safety practices, and the machines that they will operate in class.

Weekly Points- Students will be graded weekly based on a 5 point per day scale. This grade will be based on the student's ability to work safely and efficiently in the classroom and lab, as well as their contribution to clean up at the end of every class period.

Grading Scale:

93.0 – 100% A	73.0 – 76.99 C
90.0 – 92.99 A-	70.0 – 72.99 C-
87.0 – 89.99 B+	67.0 – 69.99 D+
83.0 – 86.99 B	63.0 – 66.99 D
80.0 – 82.99 B-	60.0 – 62.99 D-
77.0 – 79.99 C+	Below 60% F

Absences:

If you are absent for any reason, it is your responsibility to make up the worksheets on your own time. You can check out a book from me if necessary, or arrange time during your study period to come in to work. Once we start working in the lab, it is very important to do your best to come every day. If you are absent, you may try to arrange a time to come in outside of class to work.

Getting Help:

If for any reason you are struggling in the class, please come to me for extra help. If you are unsure how to run a machine, or are nervous, please ask me for assistance. There will be other students in the class, so you may have to be patient, but please wait if you are unsure on how to complete a process so that you will not injure yourself, anyone else, or ruin your project. I am ALWAYS willing to come in before school to allow you to work.

Behavior Expectations:

Every student must return a signed copy of this syllabus, as well as a signed copy of the safety agreement, before beginning work in the lab area.

- Work safely
- Report any injury to me immediately after it happens.
- You are responsible for the tools and equipment you are using. If you break something because of carelessness, you are responsible for it.
- Report anything that is missing or damaged immediately.
- Clean up at the end of each class period.
- Safety glasses will be worn when any tools or equipment is being operated by ANY person in the room. No one can operate any tool/equipment unless they meet all the PPE requirements, have received a demonstration, passed a safety test, and the Technology education teacher is present in the room.
- Please do not bring food or drink into the classroom or lab areas. Individual music players cannot be worn during class without approval from the instructor. Cell phones must be kept out of sight during class or they will be put into my desk drawer for the remainder of the class period.

STUDENTS WHO ARE DISRUPTIVE OR POSE A THREAT TO THEMSELVES OR OTHERS MAY BE REMOVED FROM CLASS AND SENT TO THE AP OFFICE.

Communication:

The best way to contact me with questions or concerns is via email (dcorbin@dbqschools.org). I update PowerSchool on a regular basis (at least once weekly).

Parent Awareness:

Parents/guardians and students should both be aware of the requirements of the class. Sign and date below to indicate you have read this syllabus and are aware of the expectations and responsibilities of the class. Return to instructor.

Student Name (Print): _____

Student Signature: _____

Parent/Guardian Signature: _____

Date: _____