

Woodworking Technology 30G 2018-2019

Advanced Woodworking Design - Computer Aided Design and Manufacturing

The students will be using all of the major pieces of equipment in the woodworking shop including the table saw, jointer, thickness planer, CNC Router, lathe, etc to create a project of their choosing. The students will be using an Industry leading CAD/CAM (computer aided design-manufacturing) program called Mastercam to aid in the construction of their project. Along with this program, the students will use the shops computer robotic wood router in the construction process. This is a rapidly expanding area of manufacturing and is highly recommended by industry to be part of the Technology Education Program. Also the students will be using the newly acquired 3D printer as part of their shop experience.

Welding

The students have an option of exploring Oxygen/Acetylene, Metal Inert Gas (MIG) or Arc welding as part of this course. Basic theory of welding processes as well as practical exercises will be taught. Students may choose to construct their design project in this area; however the Computer Aided Design Program must be utilized in its design stage.

Projects

Senior 3 and Senior 4 students will both design and construct a major project of his/her choosing, using the Mastercam design software. Senior 4 students will also design a mold and a lithograph picture with the program called Mastercam Art.

Student Expectations

Students are expected to arrive to class on time with the proper materials. These include a pen, pencil and a small 3 ring binder. If a student misses a class, it is his/her responsibility to find out what they missed and get caught up regarding tests, assignments, etc. This is a practical course by nature with a heavy workload. Students who do not work diligently in class will not finish the course within the time limits. Students who have a good attendance record, along with excellent working habits that need a time extension at the end of the term to finish their projects will get it. Those students with poor attendance/work habits will get a mark of incomplete with no credit awarded. Bottom line- **Show up on time-work hard-earn a good mark.**

Cell phones are not to be brought into the shop. Phones should be locked in the students lockers during class time. If a student is caught with their phone in the shop it will be confiscated for the class and handed back at the end of the period.

Attendance Policy

As per division policy.

Marking

All theory and written/computer work 50%

Shop and practical work 50%

* Includes ongoing evaluations on general shop skills, attitude and the final project. The final project's grade is influenced by its complexity, level of difficulty and amount of design and thought that student put into it. "Ready Made" blueprints or plans are discouraged. Two main objectives of this program are to encourage creativity and problem-solving skill development in the student. **Students will also be marked on a daily basis on the following: Safety, time usage and equipment use. As we are preparing the students for entry into the workforce attendance and punctuality will be taken in account when assesment occurs.**

Safety and shop practices

This consists of the student arriving on time to class with the required materials, paying attention in class, cooperating with other students regarding equipment use, following instructions, etc. The shop has many dangerous and expensive pieces of equipment within it, all which require constant supervision by myself to ensure that they are used safely. **Students who fool around in class endanger the safety of other students by causing me to focus on them instead of the entire class. For the protection of the class, these students will be asked to leave the class immediately.**

General Rules

1. Operate tools and equipment only after receiving permission.
2. Report all accidents-even minor cuts to the instructor immediately.
3. Always wear suitable eye protection, tuck in loose clothing and keep long hair in place. Hats are allowed ONLY in the welding room to prevent burns from sparks.
4. "Horseplay" of any kind is a severe violation of expected behavior and will result in withdrawal of privileges in this class. Careless attitudes and failure to observe safety precautions will result in the same action.
5. Report any defective tools or machines immediately to myself.
6. Do not attempt to use any tool or machine if you have the slightest doubt of what you are doing. Know exactly how and what you are doing before doing it. Always consult the instructor when in doubt. The only dumb question is the question that is not asked!
7. Always know the procedure and route for leaving in case of fire.
8. It is the responsibility of everyone to clean up the entire shop before the class is dismissed.
9. No student is allowed out of the room without the instructor's permission.
10. The schools late policy will be in effect for students arriving late to class.
11. **No student is allowed to prevent the teacher from teaching and other students from learning.**

Student Signature: ----- Parent/Guardian Signature: -----

Note to parents: Please feel free to visit the Technology Education Shop at anytime. Your suggestions and comments are always welcome.