

## Syllabus for Machine Tool Technology II

Instructor: Guy Hart

*Prerequisite:* Machine Tool Tech I

*Time Requirement:* Full year – 2 hour block

*Credits:* 2 credits, options – elective credit, math-related credit, visual, performing and applied arts credit.

*Textbook:* Technology of Machine Tools, Krat-Oswald, Glencoe, 3<sup>rd</sup> Edition.

*Description:* This course goes well beyond the basic concepts of the metal machine industry. The block allows for more hands-on time and more projects to be done throughout the year. Included are lectures and demonstrations that will focus on the hands-on learning with major emphasis on advanced operations on both manual and CNC machines. The class will go into more detail on the different work holding devices, set-up methods, calculations for speeds and feeds, threads, basic trigonometric functions, and blue print reading. CNC machining will include G&M code, conversational programming, and MasterCam instruction. Instruction in the use, care, and application of advanced precision measuring tools as well as machining a variety of materials common in the metal machining industry are covered as well. Career opportunities including college, apprenticeships, and on the job training are available for students interested in pursuing machining as an occupation. In addition, students will have the opportunity to compete in SkillsUSA and MITES.

*Grading:*

- Formative (10% of quarter grade): daily lab work and shop maintenance
- Summative (90% of quarter grade): Finished projects, quizzes and tests.

*Attendance:* Students are expected to call in when absent or notify the instructor in advance when missing class. This is a requirement to making up missed lab time.