

## Syllabus for Machine Tool Technology 1

Instructor: Guy Hart

*Prerequisite:* None

*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 will teach the basic concepts of the metal machine industry that both the technical and non-technical student can understand. The block allows for more hands-on time and more projects to be done throughout the year. Included are lecture and demonstrations with a focus on hands-on learning that emphasizes manual machines (lathe, mill, drill press, band saw, and surface grinding). The class also covers different work holding devices, set-up methods, calculations for speeds and feeds, threads, basic trigonometric functions, and blue print reading. CNC machining in basic G&M code and conversational programming will be presented. Instruction in the use and care of precision measuring tools as well as machining a variety of materials common in the metal machining industry are covered as well.

*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.