A. COURSE DESCRIPTION

   Credits: 2
   Lecture Hours/Week: 0
   Lab Hours/Week: 0
   OJT Hours/Week: *
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None

There has never been a better time to learn about and try Laser cutting and etching. This course draws a roadmap for getting started with Laser, which is also known as additive manufacturing). This course will discuss the different Laser operations used for Vector graphics (cutting) and Raster graphics (etching). Students will learn how to properly prepare digital files for projects of their own creation and operate laser equipment. Knowledge of materials and how to apply them is also an important part of this course. This TAD Lab is a hands-on production-based course that walks students through a step-by-step process of Laser cutting.

B. COURSE EFFECTIVE DATES: 08/20/2022 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   1. Epilog Laser
   2. Fundamentals of CNC Laser
   3. Fundamentals of CNC programming
   4. Tool Setting methods

D. LEARNING OUTCOMES (General)
   1. assess various software allowing them to create their projects.
   2. plan and sketch their projects to create successful results.
   3. explain industry terms related to each process.
   4. develop a greater understanding for developing designs for large-scale production.
   5. explain and properly use instruments such as layout tools, micrometers, and gauges.
   6. demonstrate a workable knowledge of limits, fits and tolerances.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted