



CNC 3-AXIS MILLING PROGRAMMER

Competition Overview

We will start at 8:00 AM with an overview of the contest and an introduction of the Chairs and Judges. Next, the judges will pass out the test materials consisting of:

- Instructions
- CNC theory exam
- Dimensioned drawing of the 3D model to be programmed
- Process Plan
- Step file of the 3D model to be programmed

The competition will include three activities: CNC theory exam, 3-AXIS milling programming exercise, and an interview session. The CNC theory exam will consist of multiple choice and fill in the blank questions covering various machine shop and machining topics. In the 3-AXIS milling programming exercise the students will be provided a dimensioned drawing, step file of the part to be programmed, and a process plan to follow. Once testing begins, students may choose the order in which they complete the exam. The Judges will be able to help with general questions and explanations but unable to help program or complete any tasks. During the testing, students will be pulled one at a time to do an interview. Once the interview is complete the students will go back to working the other portions of the exam. Once students complete the part programming, they will signal for a Judge to come review and grade their work. The judge will use the student's computer to grade and review their program. Students have until noon to complete all three activities of the competition. In case of a tie, the student who finished the activities the earliest will win.

Student Requirements

- Laptop with access to cam software (Mastercam, Fusion360 or Catia) and has an USB input
 - Media will be transferred via USB drive
 - Files used: Word, PDF and .STP
- Pen or pencil for notes and written test
- Updated resume to present at the interview
- Basic calculator