MFG 261 : CAM LATHE I

Transcript title
CAM Lathe I

Credits
4

Grading mode
Standard letter grades

Total contact hours
80

Lecture hours
20

Lab hours
60

Prerequisites
MFG 100; MFG 110; and MFG 119.

Course Description
Introduces Computer Aided Machining/Manufacturing (CAM) for Computer Numerically Controlled (CNC) lathes. Includes the use of software to generate toolpaths, catalog and manage tool libraries, simulate cutting processes, and revise workholding setups.

Course learning outcomes
1. Use CAM software to catalog and maintain a tool library for CNC Lathes.
2. Use CAM software to generate and simulate toolpaths for safe and efficient CNC Lathe operations.
3. Apply collision detection features on CAM software to create a program without any errors.
4. Calculate feed rates and speeds to machining industry standards.

Content outline
1. Familiarization with Computer Aided Machining (CAM) software interface
2. Procedures for importing geometric modeling data from existing CAD drawings
3. Establishing stock machining parameters for CNC lathe operations
4. Creating tooling library within CAM software
5. Toolpath generation and manipulation procedures
6. Toolpath and solid model simulation for CNC lathes
7. Post processing procedures for CNC lathes
8. Exporting Data from Software to CNC lathe

Required materials
May have required materials, refer to the course syllabus for details.