CIM 1103  Lathe Turning I

Course Information

Description  This course is an application of the turning components discussed in the introductory machine tool theory course. Proper set-up, operation, and safety of lathe use will be introduced in a lab setting. (Prerequisites: Declare CIM as a major)

Total Credits  2.00
Total Hours  64.00

Types of Instruction

Instruction Type  Credits/Hours
Lab  2/64

Pre/Corequisites

Prerequisite  Declare CIM as a major.

Institutional Core Competencies

Analysis and inquiry: Students will demonstrate an ability to analyze information from multiple sources and to raise pertinent questions regarding that information.

Civic knowledge and engagement- local and global: Students will understand the richness and challenge of local and world cultures and the effects of globalization, and will develop the skills and attitudes to function as “global citizens.”

Foundations and skills for lifelong learning: Students will display an understanding of learning as a lifelong process through demonstration of a desire to learn, the willingness to apply learning to other areas of their lives, the ability to think and act independently, be willing to take the initiative to get projects done, and demonstrate the ability to reflect upon what has occurred and how it impacts the student and others.

Course Competencies

1  Utilize precision measurement hand tools.

   Learning Objectives
   Explain precision measurement.
   Use precision fixed gauges.
   Characterize vernier measuring tools.
   Use micrometers.

2  Identify lathe components.
Learning Objectives
Label the parts of the lathe.
Describe the functions of various elements of the lathe.

3 Select the proper tool for the turning operation.

Learning Objectives
Describe various tools and tool-holders for the lathe.
Differentiate uses of lathe tools.

4 Perform speed and feed operations.

Learning Objectives
Calculate proper speeds and feeds.
Adjust speeds and feeds according to cutting conditions.

5 Exhibit deburring skills.

Learning Objectives
Inspect quality of finished part to determine if burrs are present.
Define tools that can be used for deburring.
Select proper tool for deburring.

6 Develop workholding skills.

Learning Objectives
Explain fixturing.
Identify types of clamping methods.
Explain soft jaw clamping methods.
Use clamping in product creation practice.

7 Exhibit safety practices specific to lathe use.

Learning Objectives
Identify unsafe practices in regards to turning.
Utilize caution appropriate to turning procedures.

8 Perform machine maintenance.

Learning Objectives
Examine lathe for fluid levels and adjust as needed.
Describe the importance of routine maintenance.
Identify uses of lubrication and cutting fluids.
Complete series of maintenance steps when job is finished.

9 Create parts on the lathe.

Learning Objectives
Perform a variety of lathe operations.
Utilize prints to make associated parts.

SCC Accessibility Statement
If you have a disability and need accommodations to participate in the course activities, please contact your instructor as soon as possible. This information will be made available in an alternative format, such as Braille, large print, or cassette tape, upon request. If you wish to contact the college ADA Coordinator, call that office at 507-389-7222.

Disabilities page [http://southcentral.edu/academic-policies/disability-rights.html](http://southcentral.edu/academic-policies/disability-rights.html)