



South Central College

MTT 2250 MTT Capstone

Course Outcome Summary

Course Information

Description	This course provides students with continuing opportunities to work on applying their skills, building on what was learned in the previous Applications courses. Additional material is also introduced: topics include advanced grinding techniques. This is a variable credit course. (Prerequisites: MTT 2130 and MTT 2140)
Total Credits	4
Total Hours	128

Types of Instruction

Instruction Type	Credits/Hours
Lab	2-4/64-128

Pre/Corequisites

MTT 2130 and MTT 2140

Institutional Core Competencies

Civic Engagement and Social Responsibility - Students will be able to demonstrate the ability to engage in the social responsibilities expected of a community member.

Communication - Students will be able to demonstrate appropriate and effective interactions with others to achieve their personal, academic, and professional objectives.

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Cultural Competence - Students will be able to demonstrate an attitude of personal curiosity, a rising knowledge of cultures, and an evolving range of skills for living and working among others with other worldviews and ways of life.

Course Competencies

1. Perform set-up operations on the grinding machine

Learning Objectives

Set-up manual grinder

Set-up cylindrical grinder for outside diameter (OD) grinding

2. Use the grinding magnet

Learning Objectives

Discuss proper care of magnet (cleanliness)
Describe proper use of honing stone

3. Demonstrate grinding to print

Learning Objectives

Illustrate grinding perpendicular to +or- .0003
Illustrate grinding parallel to +or- .0003

4. Utilize the grinding wheel dresser

Learning Objectives

Demonstrate how to "true" a grinding wheel
Demonstrate how to side dress a grinding wheel

5. Demonstrate form dressing

Learning Objectives

Demonstrate form dressing an outside radius on a grinding wheel
Demonstrate form dressing an angle on a grinding wheel

6. Use grinding wheel

Learning Objectives

Demonstrate balancing grinding wheel
Demonstrate mounting wheel on grinder
Select proper grinding wheel

7. Use advanced inspection equipment and documentation

Learning Objectives

Use roamer arm coordinate measuring machine (CMM)
Illustrate proper inspection sheet documentation
Use Bridge style CMM

8. Illustrate ability to complete tasks on time

Learning Objectives

Demonstrate professionalism
Create parts to print specifications

9. Describe milling mold cavity

Learning Objectives

Discuss machining runners to specifications
Discuss machining gates to specifications

10. Demonstrate mold press safety

Learning Objectives

Explain how to adjust press shut height
Explain how to adjust knock out bar

11. Discuss types of plastics

Learning Objectives

Identify thermosetting plastic
Identify thermoplastics

12. Demonstrate grinding a radius

Learning Objectives

Grind an inside radius
Grind an outside radius

13. Exhibit lab safety

Learning Objectives

Use proper personal protective equipment (PPE) and safety glasses
Demonstrate proper clean-up of shop and machines

14. Demonstrate process planning and process procedures

Learning Objectives

Create a bill of material
Identify machinery to make specific project
Identify proper inspection plan for specific projects
Identify tooling needed for project

SCC Accessibility Statement

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Additional information and forms can be found at: www.southcentral.edu/disability

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