Curriculum Development Form — New Course

Course Designator, Number, Title and Number of Credits (i.e. ACCT 1800, Business Law, 3 cr)

Date of Proposal: 2-17-15  Author: Jon Morgan

Course Contact: NON MORGAN  Grade:  

Grading Method:  

Scheduling:  

☐ Fall ☐ Spring ☐ Summer ☐ Alternate Years ☐ Variable ☐ On Demand

Is this proposed course a Liberal Arts and Sciences course?  

☐ Yes ☑ No

If yes, which MnTC area(s) will it fulfill (http://mntransfer.org)?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

Is this course a requirement/elective for a specific program or programs?  

☑ Yes ☐ No

If yes, which program(s)? — DARS search  

What impact will this new course have on other program(s)?  

None

Describe the rationale for offering this new course:  

Change from Variable to  

Non Variable Credit or 4 credits

Attach additional paperwork if necessary

As Faculty Developer, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

Prior to Preparing Documentation

☑ Initiation — idea was submitted to Department Chair(s) and Academic Dean/Director for discussion and support

☑ Explored existing course offerings to identify potential duplication

☑ Completed Intention Form

Continue the Curriculum Development Process

☑ Used online WIDS to create Common Course Outline (CCO)

☑ Identified:

• concise 2-3 sentence course description

• course prefix and number

• course name

• lecture/lab credits and hour breakdown

• prerequisites

• MnTC goal area — LAS courses

☑ Completed MnTC Goal Area Cross-walk Template (for LAS MnTC courses only)

☑ Created measurable course competencies and learning objectives

☑ Considered potential opportunities and impacts of the change on other programs/departments — DARS Search.

☑ Proofread documentation for correct content on CCOs based on SCC example

☑ Proofread documentation for grammatical and typographical errors

Faculty Developer Signature  2-17-15

As Primary Department Chair, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

☑ Documentation through email and department meetings made available for other faculty and programs to provide feedback, includes MnTC Goal Area Cross-walk Template(s)

☑ Proofread documentation for correct content and proper structure on CCOs based on SCC example

☑ Proofread documentation for grammatical and typographical errors

☑ I support this course ☐ I do not support this course — please provide reason(s):

Primary Department Chair Signature  2-18-15
For LAS (MnTC courses) — As a LAS Department Chair, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

☐ LAS course (specifically MnTC courses), documentation through email and department meetings made available for other faculty and programs to provide feedback, includes MnTC Goal Area Cross-walk Template(s)

☐ I support this course

☐ I do not support this course — please provide reason(s):

________________________________________________________________________

LAS Department Chair Signature                      Date

☐ I support this course

☐ I do not support this course — please provide reason(s):

________________________________________________________________________

LAS Department Chair Signature                      Date

☐ I support this course

☐ I do not support this course — please provide reason(s):

________________________________________________________________________

LAS Department Chair Signature                      Date

If all 4 LAS Department Chairs do not support the new course proposal, faculty developer can elevate the proposal to AASC for resolution.

As Academic Dean/Director, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

☑ Identified potential opportunities and impacts of the change on other programs/departments — DARS search

☐ Reviewed MnTC Goal Area Cross-walk Template (for LAS MnTC courses only)

☐ MnTC Goal Area is appropriate based on MnSCU guidelines — Transfer Specialist consulted

☑ Verified credentials for faculty teaching the course

☑ Addressed the need for Class Maximum Change Request form

☐ No change in class maximum OR

☐ Change in class maximum — Class Maximum Change Request form completed with all necessary signatures

☐ I support this course

☐ I do not support this course — please provide reason(s):

________________________________________________________________________

Academic Dean/Director Signature                      Date

If Academic Dean/Director does not support the new course proposal, faculty developer can elevate proposal to AASC for resolution.

Upload this signed form as a PDF to WIDS Shared Document folder — Curriculum Committee.

Following Curriculum Committee support, this form is completed with final signatures.

________________________________________________________________________

Curriculum Committee Chair Signature                      Date

Vice President of Student and Academic Affairs Signature                      Date

New Course Form — 12/9/14 — Page 2
South Central College

CIM 2109 Applications II

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 course. Additional material is also introduced; topics include machining with carbide, producing heat treated parts and basic surface grinding. (Prerequisites: CIM 1206 - Machine Tool Theory II)

Total Credits 4.00
Total Hours 128.00

Types of Instruction

Instruction Type  Credits/Hours
Lab  4/128

Pre/Corequisites

CIM 1206 – Machine Tool Theory II

Course Competencies

1. Grind perpendicular to +or- .0005.
   Learning Objectives
   Use precision vice.
   Grind feature to print.

2. Apply heat treat methods.
   Learning Objectives
   Explain hardening work piece.
   Explain tempering work piece.

3. Demonstrate grinding procedures.
   Learning Objectives
   Use angle plate.
   Use honing stones.

4. Use measurement tools.
   Learning Objectives
   Demonstrate the use of Surface Plates.
   Use scribers and dividers.
   Demonstrate layout with center punch.
5. **Demonstrate the ability to meet deadlines.**

   **Learning Objectives**
   Illustrate employable attendance habits.
   Illustrate employable punctuality habits.

6. **Identify general purpose turning tools.**

   **Learning Objectives**
   Use high speed tooling.
   Use carbide insert tooling.

7. **Explain milling process and procedures.**

   **Learning Objectives**
   Describe milling steps to +or- .005.
   Describe milling angles to +or- 1 degree.

8. **Explain lathe processes and procedures.**

   **Learning Objectives**
   Describe boring internal diameters to +or- .0005.
   Describe turning between centers to +or- .003.

9. **Describe quench mediums.**

   **Learning Objectives**
   Use oil quenching material.
   Use air hardening material.

10. **Demonstrate Layout.**

    **Learning Objectives**
    Setup basic semi-precision layout.
    Setup basic precision layout.
    Demonstrate layout procedure.

11. **Describe mechanical hardware.**

    **Learning Objectives**
    Identify thread and threaded fasteners.
    Demonstrate the application of common mechanical hardware.
    Explain Metric and English thread format.

12. **Exhibit lab safety.**

    **Learning Objectives**
    Illustrate proper dress code and eye glasses.
    Demonstrate shop clean-up.

**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)
Curriculum Development Form — New Course

Course Designator, Number, Title and Number of Credits (i.e. ACCT 1800, Business Law, 3 cr)

Date of Proposal: 2-17-15

Author: Jon Morgan

Course Contact: Son Mollard

Grading Method: A Grade

Scheduling: √ Fall  □ Spring  □ Summer  □ Alternate Years  □ Variable  □ On Demand

Is this proposed course a Liberal Arts and Sciences course? □ Yes  √ No

If yes, which MnTC area(s) will it fulfill (http://mntransfer.org)?

□ 1  □ 2  □ 3  □ 4  □ 5  □ 6  □ 7  □ 8  □ 9  □ 10

Is this course a requirement/elective for a specific program or programs?  √ Yes  □ No

If yes, which program(s)? — DARS search  C/M

What impact will this new course have on other program(s)? None

Describe the rationale for offering this new course: Credit increase from 3-4 credits

Attach additional paperwork if necessary

As Faculty Developer, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

Prior to Preparing Documentation

√ Initiation — idea was submitted to Department Chair(s) and Academic Dean/Director for discussion and support

√ Explored existing course offerings to identify potential duplication

√ Completed Intention Form

Continue the Curriculum Development Process

√ Used online WIDS to create Common Course Outline (CCO)

√ Identified:
  • concise 2-3 sentence course description  • course name  • lecture/lab credits and hour breakdown
  • course prefix and number  • prerequisites  • MnTC goal area — LAS courses

√ Completed MnTC Goal Area Cross-walk Template (for LAS MnTC courses only)

√ Created measurable course competencies and learning objectives

√ Considered potential opportunities and impacts of the change on other programs/departments — DARS Search

√ Proofread documentation for correct content on CCOs based on SCC example

√ Proofread documentation for grammatical and typographical errors

Faculty Developer Signature

Date: 2-17-15

As Primary Department Chair, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

√ Documentation through email and department meetings made available for other faculty and programs to provide feedback, includes MnTC Goal Area Cross-walk Template(s)

√ Proofread documentation for correct content and proper structure on CCOs based on SCC example

√ Proofread documentation for grammatical and typographical errors

√ I support this course  □ I do not support this course — please provide reason(s):

Primary Department Chair Signature

Date: 2-18-15
For LAS (MnTC courses) — As a LAS Department Chair, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

☐ LAS course (specifically MnTC courses), documentation through email and department meetings made available for other faculty and programs to provide feedback, includes MnTC Goal Area Cross-walk Template(s)

☐ I support this course

☐ I do not support this course — please provide reason(s):

______________________________
LAS Department Chair Signature

______________________________
Date

☐ I support this course

☐ I do not support this course — please provide reason(s):

______________________________
LAS Department Chair Signature

______________________________
Date

☐ I support this course

☐ I do not support this course — please provide reason(s):

______________________________
LAS Department Chair Signature

______________________________
Date

If all 4 LAS Department Chairs do not support the new course proposal, faculty developer can elevate the proposal to AASC for resolution.

As Academic Dean/Director, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

☐ Identified potential opportunities and impacts of the change on other programs/departments — DARS search

☐ Reviewed MnTC Goal Area Cross-walk Template (for LAS MnTC courses only)

☐ MnTC Goal Area is appropriate based on MnSCU guidelines — Transfer Specialist consulted

☐ Verified credentials for faculty teaching the course

☐ Addressed the need for Class Maximum Change Request form

☐ No change in class maximum OR

☐ Change in class maximum — Class Maximum Change Request form completed with all necessary signatures

☐ I support this course

☐ I do not support this course — please provide reason(s):

______________________________
Academic Dean/Director Signature

______________________________
2/18/15

If Academic Dean/Director does not support the new course proposal, faculty developer can elevate proposal to AASC for resolution.

Upload this signed form as a PDF to WIDS Shared Document folder — Curriculum Committee.

Following Curriculum Committee support, this form is completed with final signatures.

______________________________
Curriculum Committee Chair Signature

______________________________
Date

______________________________
Vice President of Student and Academic Affairs Signature

______________________________
Date

New Course Form — 12/9/14 — Page 2
CIM 2204  CNC Programming IV

Course Outcome Summary

Course Information

Description
This course provides students with continuing opportunities to work with CNC programming, and building on what was learned in the previous programming course. Additional material includes alternative work holding and advanced tooling set-up and operation for production of an advanced project. (Prerequisite: CIM 2103 - CNC Programming III).

Total Credits 4.00
Total Hours 96.00

Types of Instruction

Instruction Type Credits/Hours
Lecture 2/32
Lab 2/64

Pre/Corequisites

CIM 2103 - CNC Programming III

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.

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.

Teamwork and problem-solving: Students will demonstrate the ability to work together cohesively with diverse groups of persons, including working as a group to resolve any issues that arise.

Course Competencies

1. Execute spindle orientation.
   Learning Objectives
   Describe spindle orientation.
   Identify code for spindle orientation.

2. Demonstrate ability to initiate machine maintenance.
   Learning Objectives
Illustrate checking oil level.
Illustrate checking air pressure.

3. **Discuss program stop.**
   Learning Objectives
   Use slide hold.
   Use emergency stop.

4. **Describe program override.**
   Learning Objectives
   Use spindle override.
   Use feedrate override.

5. **Describe fourth axis.**
   Learning Objectives
   Use fourth axis.
   Illustrate indicating fourth axis.

6. **Develop indicating part practice.**
   Learning Objectives
   Illustrate indicating part for flatness.
   Illustrate indicating a diameter.

7. **Demonstrate proper tool holder use.**
   Learning Objectives
   Explain tool holder taper.
   Explain cleaning tool holder taper.

8. ** Demonstrate ability to identify cutters.**
   Learning Objectives
   Use carbide endmills.
   Use roughing endmills.

9. **Utilize mid program start.**
   Learning Objectives
   Describe mid program start.
   Discuss mid program CNC start.

10. **Develop CNC code with Mastercam**
    Learning Objectives
    Describe NC code format
    Illustrate NC upload and editing of program

11. **Demonstrate CNC programming of 2d Toolpaths**
    Learning Objectives
    Use 2d high speed toolpaths.
    Use circle toolpaths (C-Mill, Slot Mill, Helix Bore)

12. **Demonstrate CNC programming of 3d Toolpaths**
    Learning Objectives
    Use surface rough and finish toolpaths
    Use surface high speed toolpaths

**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
Curriculum Development Form — New Course

Course Designator, Number, Title and Number of Credits (i.e. ACCT 1800, Business Law, 3 cr)
CIM 2205 Advanced Quality & Inspection 4.08

Date of Proposal: 2-17-15  Author: Jon Morgan

Course Contact: Jon Morgan  Grading Method: ☒ Grade  ☐ Pass/Fail

Scheduling: ☒ Fall  ☐ Spring  ☐ Summer  ☐ Alternate Years  ☐ Variable  ☐ On Demand

Is this proposed course a Liberal Arts and Sciences course?  ☐ Yes  ☒ No

If yes, which MnTC area(s) will it fulfill (http://mntransfer.org)?
1 2 3 4 5 6 7 8 9 10

Is this course a requirement/elective for a specific program or programs?  ☒ Yes  ☐ No
If yes, which program(s)? — DARS search  CIM

What impact will this new course have on other program(s)?  None

Describe the rationale for offering this new course: Credit Increase From 2-14

Attach additional paperwork if necessary

As Faculty Developer, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

Prior to Preparing Documentation
☒ Initiation — idea was submitted to Department Chair(s) and Academic Dean/Director for discussion and support
☒ Explored existing course offerings to identify potential duplication
☒ Completed Intention Form

Continue the Curriculum Development Process
☒ Used online WIDS to create Common Course Outline (CCO)
☒ Identified:
  • concise 2-3 sentence course description
  • course prefix and number
  • course name
  • prerequisites
  • lecture/lab credits and hour breakdown
  • MnTC goal area — LAS courses

☒ Completed MnTC Goal Area Crosswalk Template (for LAS MnTC courses only)
☒ Created measurable course competencies and learning objectives
☒ Considered potential opportunities and impacts of the change on other programs/departments — DARS Search
☒ Proofread documentation for correct content on CCOs based on SCC example
☒ Proofread documentation for grammatical and typographical errors

Faculty Developer Signature  2-17-15

As Primary Department Chair, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

☒ Documentation through email and department meetings made available for other faculty and programs to provide feedback, includes MnTC Goal Area Crosswalk Template(s)
☒ Proofread documentation for correct content and proper structure on CCOs based on SCC example
☒ Proofread documentation for grammatical and typographical errors
☒ I support this course  ☐ I do not support this course — please provide reason(s):

Primary Department Chair Signature  2-18-15
For LAS (MnTC courses) — As a LAS Department Chair, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

☐ LAS course (specifically MnTC courses), documentation through email and department meetings made available for other faculty and programs to provide feedback, includes MnTC Goal Area Cross-walk Template(s)

☐ I support this course  ☐ I do not support this course — please provide reason(s):

________________________________________________________

LAS Department Chair Signature  Date

☐ I support this course  ☐ I do not support this course — please provide reason(s):

________________________________________________________

LAS Department Chair Signature  Date

☐ I support this course  ☐ I do not support this course — please provide reason(s):

________________________________________________________

LAS Department Chair Signature  Date

If all 4 LAS Department Chairs do not support the new course proposal, faculty developer can elevate the proposal to AASC for resolution.

As Academic Dean/Director, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

☒ Identified potential opportunities and impacts of the change on other programs/departments — DARS search

☒ Reviewed MnTC Goal Area Cross-walk Template (for LAS MnTC courses only)

☒ MnTC Goal Area is appropriate based on MnSCU guidelines — Transfer Specialist consulted

☒ Verified credentials for faculty teaching the course

☒ Addressed the need for Class Maximum Change Request form

☐ No change in class maximum OR

☐ Change in class maximum — Class Maximum Change Request form completed with all necessary signatures

☐ I support this course  ☐ I do not support this course — please provide reason(s):

________________________________________________________

Academic Dean/Director Signature  2/18/15

If Academic Dean/Director does not support the new course proposal, faculty developer can elevate proposal to AASC for resolution.

Upload this signed form as a PDF to WIDS Shared Document folder — Curriculum Committee.

Following Curriculum Committee support, this form is completed with final signatures:

________________________________________________________

Curriculum Committee Chair Signature  3/6/2015

________________________________________________________

Vice President of Student and Academic Affairs Signature  3-20-15

New Course Form — 12/9/14 — Page 2
CIM 2205 Advanced Quality and Inspection

Course Outcome Summary

Course Information

Description: This course provides an overview of measurement systems, machine tool math, and quality control. Students will have opportunities to inspect the quality of final products and focus on implementing quality assurance procedures. (Prerequisite: CIM 1201 – Interpreting Engineering Drawings II)

Total Credits: 4.00
Total Hours: 96.00

Types of Instruction

<table>
<thead>
<tr>
<th>Instruction Type</th>
<th>Credits/Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>2/32</td>
</tr>
<tr>
<td>Lab</td>
<td>2/64</td>
</tr>
</tbody>
</table>

Pre/Corequisites

CIM 1201 – Interpreting Engineering Drawings II

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.

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.

Teamwork and problem-solving: Students will demonstrate the ability to work together cohesively with diverse groups of persons, including working as a group to resolve any issues that arise.

Course Competencies

1. Utilize measurement systems and machine tool math.

   Learning Objectives
   Explain numbering system found on prints (tenths, millionths, etc).
   Demonstrate fractional/decimal conversions.
   Use basic geometry, trigonometry, and ratios.
   Apply fractional operations.
   Explain the English and Metric systems.
2. Use semi-precision measurement tools.

   Learning Objectives
   Identify key measurement terms.
   Demonstrate use of callipers.
   Use adjustable squares.
   Apply angular measurements.
   Demonstrate fixed gage applications.

3. Use precision measurement tools.

   Learning Objectives
   Explain the concept of precision measurement.
   Use precision fixed gages.
   Utilize micrometers.
   Demonstrate surface plates.

4. Identify special measuring tools.

   Learning Objectives
   Identify a coordinate measuring machine.
   Define optical comparator operation.
   Explain the toolmaker's microscope.

5. Explain specific concepts in quality assurance.

   Learning Objectives
   Define mean.
   Develop histogram.
   Show meaning of standard deviation.

6. Describe control and how it is used in quality process.

   Learning Objectives
   Acquire a test sample.
   Explain what 'sample population' is and how it is utilized.

7. Define types of errors.

   Learning Objectives
   Explain random errors.
   Describe systematic errors.
   Identify causes of errors.

8. Identify steps for keeping quality records.

   Learning Objectives
   Develop a quality record system.
   Investigate continuous improvement methods.
   Manage the quality assurance program.

9. Learn Special Measurement Tools

   Learning Objectives
   Identify Coordinate Measuring Machine
   Define Optical Comparator Operation
   Explain Toolmaker's Microscope

10. Adopt Maintenance Schedules

    Learning Objectives
    Communicate Lubrication Needs
    Use Cutting Fluids
    Demonstrate Measuring of Cutting Fluid Techniques
    Explain Methods of Application
    Demonstrate Measuring of Cutting Fluid Techniques
11. **Communicate Knowledge**

   **Learning Objectives**
   - Take Detailed Notes
   - Ask Questions to Industry Representatives
   - Practice Problem-Solving and Manual Dexterity
   - Communicate with Team members
   - Identify and Properly name Shop Tools, Components, Supplies, and Equipment

12. **Use precision layout in CNC Machine**

   **Learning Objectives**
   - Use probe to set work offset
   - Use probe to set tool length offset
   - Use probe to measure features on part

**SCC Accessibility Statement**

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Curriculum Development Form — New Course

Course Designator, Number, Title and Number of Credits (i.e. ACCT 1800, Business Law, 3 cr)

Date of Proposal: 2-17-15
Course Contact: Jon Morgan
Grading Method: ☑ Grade ☐ Pass/Fail
Scheduling: ☑ Fall ☐ Spring ☐ Summer ☐ Alternate Years ☐ Variable ☐ On Demand
Is this proposed course a Liberal Arts and Sciences course? ☑ Yes ☐ No
If yes, which MnTC area(s) will it fulfill (http://mtransfer.org)?
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10
Is this course a requirement/elective for a specific program or programs? ☑ Yes ☐ No
If yes, which program(s)? — DARS search CIM

What impact will this new course have on other program(s)? None

Describe the rationale for offering this new course: Variable 2+04 credits

Attach additional paperwork if necessary

As Faculty Developer, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

Prior to Preparing Documentation
☑ Initiation — idea was submitted to Department Chair(s) and Academic Dean/Director for discussion and support
☑ Explored existing course offerings to identify potential duplication
☑ Completed Intention Form

Continue the Curriculum Development Process
☑ Used online WIDS to create Common Course Outline (CCO)
☑ Identified:
  • concise 2-3 sentence course description
  • course name
  • course prefix and number
  • lecture/lab credits and hour breakdown
  • MnTC goal area — LAS courses
☑ Completed MnTC Goal Area Cross-walk Template (for LAS MnTC courses only)
☑ Created measurable course competencies and learning objectives
☑ Considered potential opportunities and impacts of the change on other programs/departments — DARS Search
☑ Proofread documentation for correct content on CCOs based on SCC example
☑ Proofread documentation for grammatical and typographical errors

Faculty Developer Signature 2-17-15

As Primary Department Chair, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):
☑ Documentation through email and department meetings made available for other faculty and programs to provide feedback, includes MnTC Goal Area Cross-walk Template(s)
☑ Proofread documentation for correct content and proper structure on CCOs based on SCC example
☑ Proofread documentation for grammatical and typographical errors
☑ I support this course ☑ I do not support this course — please provide reason(s):

Primary Department Chair Signature 2-18-15
For LAS (MnTC courses) — As a LAS Department Chair, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

☐ LAS course (specifically MnTC courses), documentation through email and department meetings made available for other faculty and programs to provide feedback, includes MnTC Goal Area Cross-walk Template(s)

☐ I support this course ☐ I do not support this course — please provide reason(s):

______________________________    ____________________________
LAS Department Chair Signature          Date

☐ I support this course ☐ I do not support this course — please provide reason(s):

______________________________    ____________________________
LAS Department Chair Signature          Date

☐ I support this course ☐ I do not support this course — please provide reason(s):

______________________________    ____________________________
LAS Department Chair Signature          Date

If all 4 LAS Department Chairs do not support the new course proposal, faculty developer can elevate the proposal to AASC for resolution.

As Academic Dean/Director, by signing this New Course form, the Curriculum Committee is assured of the following (check marks required):

☒ Identified potential opportunities and impacts of the change on other programs/departments — DARS search
☒ Reviewed MnTC Goal Area Cross-walk Template (for LAS MnTC courses only)
☒ MnTC Goal Area is appropriate based on MnSCU guidelines — Transfer Specialist consulted
☒ Verified credentials for faculty teaching the course
☒ Addressed the need for Class Maximum Change Request form
☐ No change in class maximum OR
☐ Change in class maximum — Class Maximum Change Request form completed with all necessary signatures

☐ I support this course ☐ I do not support this course — please provide reason(s):

______________________________    ____________________________
Academic Dean/Director Signature          Date

If Academic Dean/Director does not support the new course proposal, faculty developer can elevate proposal to AASC for resolution.

Upload this signed form as a PDF to WIDS Shared Document folder — Curriculum Committee.

Following Curriculum Committee support, this form is completed with final signatures.

______________________________    ____________________________
Curriculum Committee Chair Signature               Date

______________________________    ____________________________
Vice President of Student and Academic Affairs Signature               Date
South Central College

CIM 2211 CIM 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. If the Internship (CIM 1107) was completed or if 4 credits of Applications II (CIM 2108) were completed, only 2 credits of this course are required for CIM students. If the Internship was not completed and only 2 credits of Applications II were completed, all 4 credits are required. (Prerequisites: CIM 2108 - Applications II)

Total Credits
4.00

Total Hours
128.00

Types of Instruction

Instruction Type
Lab

Credits/Hours
2-4/64-128

Pre/Corequisites

CIM 2108 - Applications II

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.

Critical and creative thinking: Students will develop the disposition and skills to strategize, gather, organize, create, refine, analyze, and evaluate the credibility of relevant information and ideas.

Teamwork and problem-solving: Students will demonstrate the ability to work together cohesively with diverse groups of persons, including working as a group to resolve any issues that arise.

Written and oral communication: Students will communicate effectively in a range of social, academic, and professional contexts using a variety of means, including written, oral, numeric/quantitative, graphic, and visual modes of communication.

Course Competencies

1. Perform set-up operations on the grinding machine.

   Learning Objectives
   Set-up manual grinder.
   Set-up cylindrical grinder for O.D. grinding.
2. Use the grinding magnet.
   Learning Objectives
   Dial in magnet.
   Dial in magnet fence.

3. Demonstrate grinding to print.
   Learning Objectives
   Illustrate grinding perpendicular to +or-.0003.
   Illustrate grinding parallel to +or-.0003.

4. Interact with the grinding wheel dresser.
   Learning Objectives
   Demonstrate how to "True" a grinding wheel.
   Demonstrate how to side dress a grinding wheel.

5. Practice form dressing.
   Learning Objectives
   Demonstrate form dressing an outside radius on a grinding wheel.
   Demonstrate form dressing an angle on a grinding wheel.

6. Select proper grinding wheel.
   Learning Objectives
   Demonstrate balancing grinding wheel.
   Demonstrate mounting wheel on grinder.

7. Identify injection mold processes.
   Learning Objectives
   Analyze flash problems.
   Analyze vent problems.

8. Illustrate ability to complete tasks on time.
   Learning Objectives
   Demonstrate professionalism.
   Demonstrate part craftsmanship.

9. Describe milling mold cavity.
   Learning Objectives
   Illustrate machining runners to specifications.
   Illustrate machining gates to specifications.

    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
    Show grinding an inside radius.
    Show grinding an outside radius.
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.

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