Curriculum Development Form — Modify an Existing Course

Course Designator, Number, Title and Number of Credits (i.e. ACCT 1800, Business Law, 3 cr)
WELD 1011 OSHA 10 HR and Welding Safety (1 credit) Change to: WELD 1011 Welding Safety

Date of Proposal: 2/18/2015 Author: Joe Volk

Course Contact: Joe Volk 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

The course is being: ✓ Modified □ Deleted (complete Intention Form and obtain signatures)

Describe the modification and the rationale:

Change the name to: Welding Safety shorter title

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

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

WELDING Certificate and WELDING Diploma

What impact will this modified course have on other program(s)? none

Attach additional paperwork if necessary

As Faculty Developer, by signing this Modify an Existing 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
✓ Completed Intention Form

Continue the Curriculum Development Process
✓ COPY of existing CCO was used to make changes
✓ Double-checked:
  • 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)
✓ Verified 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 and proper structure on CCOs based on SCC example
✓ Proofread documentation for grammatical and typographical errors

Faculty Developer Signature Date
Feb 19, 2015

As Primary Department Chair, by signing this Modify an Existing 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
2/19/15

Modify an Existing Course Form — 12/9/14 — Page 1
For LAS (MnTC courses) — As a LAS Department Chair, by signing this Modify an Existing 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 modified course proposal, faculty developer can elevate the proposal to AASC for resolution.

As Academic Dean/Director, by signing this Modify an Existing 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  
Date

If Academic Dean/Director does not support the modified course proposal, faculty developer can elevate the 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  
Date

Vice President of Student and Academic Affairs Signature  3/20/15  
Date
WELD 1011* Welding Safety [OSHA 10 Hour and Welding Safety II] (Copy)

Course Outcome Summary

Course Information

Description: Topics in this course include the basics of welding safety including proper equipment use and maintenance, machine guarding, bloodborne pathogens, safety & health programs, and overall welding safety. (Prerequisite: None)

Total Credits: 1.00
Total Hours: 16.00

Types of Instruction

Instruction Type: Lecture
Credits/Hours: 1 / 16

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.

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. Describe machine guarding.

   Learning Objectives
   Describe at least two of the main causes of machine accidents.
   List three of the requirements for safeguards.
   List five machinery parts that pose hazards when unguarded or improperly guarded.
   List five types of machine guards.
   List three types of devices used to safeguard machines.
   Describe a situation that warrants machine guarding and an appropriate method of guarding the machine or part in order to prevent injury or accident.

2. Explain bloodborne pathogens.

   Learning Objectives
   List three examples of workers who are at risk of exposure to bloodborne pathogens.
   List three ways exposure to bloodborne pathogens commonly occurs.
Describe five key aspects of a bloodborne pathogen exposure control plan.
Explain how properly used Personal Protective Equipment (PPE) and appropriate housekeeping methods protect against exposure to bloodborne pathogens.
List three steps to take if exposed to a bloodborne pathogen.

3. **Identify information about safety and health programs.**

   Learning Objectives
   Discuss the benefits of an effective safety and health program.
   Name the four elements of an effective safety and health program.
   Name three methods to prevent and control workplace hazards.

4. **Describe welding safety.**

   Learning Objectives
   Identify electrical shock hazard.
   Identify proper methods of handling hot metal.
   List dangerous conditions created by fumes and gases.
   Identify safety equipment and clothing to prevent damage or injury from arc rays.
   List how electric and magnetic fields can affect implanted medical devices.

5. **Practice welding safety.**

   Learning Objectives
   Demonstrate safe procedures when chipping, wire brushing, and grinding.
   Demonstrate proper use of ear protection.
   Demonstrate proper handling of gas cylinders.

**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 — Modify an Existing Course

Course Designator, Number, Title and Number of Credits (i.e. ACCT 1800, Business Law, 3 cr)
WELD 1025 Intro to Shielded Metal Arc Welding (2 credits) change to reduce to (1 credit)

Date of Proposal: 2/18/2015
Author: Joe Volk
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
The course is being: ✓ Modified  □ Deleted (complete Intention Form and obtain signatures)
Describe the modification and the rationale:
Change credit down to just one, based on advisory committee feedback to just introduce this type of welding

Is this course a requirement/elective for a specific program or programs?  ✓ Yes  □ No
If yes, which program(s)? — DARS search
WELDING Certificate and WELDING Diploma

What impact will this modified course have on other program(s)?
none

Attach additional paperwork if necessary

As Faculty Developer, by signing this Modify an Existing 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
✓ Completed Intention Form
Continue the Curriculum Development Process
✓ COPY of existing CCO was used to make changes
✓ Double-checked:
  • 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)
✓ Verified 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 and proper structure on CCOs based on SCC example
✓ Proofread documentation for grammatical and typographical errors

Faculty Developer Signature  Feb 19, 2015

As Primary Department Chair, by signing this Modify an Existing 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  2-19-15

Modify an Existing Course Form — 12/9/14 — Page 1
For LAS (MnTC courses) — As a LAS Department Chair, by signing this Modify an Existing 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 modified course proposal, faculty developer can elevate the proposal to AASC for resolution.

As Academic Dean/Director, by signing this Modify an Existing 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):

_______________________________  2/18/15
Academic Dean/Director Signature               Date

If Academic Dean/Director does not support the modified course proposal, faculty developer can elevate the 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.

_______________________________  3/6/2015
Curriculum Committee Chair Signature               Date

 ______________________________  3-20-15
Vice President of Student and Academic Affairs Signature               Date
WELD 1025* Introduction to Shielded Metal Arc Welding (SMAW) (Copy)

Course Outcome Summary

Course Information

Description: This course will provide an introduction to Shielded Metal Arc Welding (SMAW) on carbon steel in various positions along with an introduction to welding safety and electrodes: types, selection, discussion of power sources. Types of SMAW will be introduced, including selection of materials and steps necessary to complete tasks. Basic information about duty cycle, cable sizing, arc blow, and electrodes will also be presented. (Prerequisites: None)

Total Credits: 1.00
Total Hours: 32.00

Types of Instruction
Instruction Type: Lab
Credits/Hours: 1 / 32

Pre/Corequisites
None

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.

Course Competencies

1. Describe basic components of shielded metal arc weldments.
   Learning Objectives
   Use basic welding terminology.
   Describe general weld joint configurations.

2. Recognize basic metallurgical components used in SMAW.
   Learning Objectives
   Identify base metals by elementary metallurgy (mild steel, cast iron, low alloy steels, aluminum, brass, copper, stainless steel).
   Differentiate base metals and filler metals by choosing the correct filler metal for certain basic applications.

3. Prepare welding equipment to accomplish given tasks.
Learning Objectives
Select appropriate welding rod.
Determine proper machine amperage.
Select correct polarity.

4. **Utilize knowledge of rod manipulation in SMAW.**

   Learning Objectives
   Describe rod angles & rod manipulation techniques.
   Practice proper rod manipulation techniques.

5. **Demonstrate single pass and multiple pass welding techniques.**

   Learning Objectives
   List the proper steps in welding a multiple pass weldment.
   Describe a single pass weldment.
   Practice single pass and multiple pass welding techniques.

6. **Utilize knowledge of electrodes in regards to shield metal arc welding.**

   Learning Objectives
   Identify types of electrodes and their uses.
   Select proper electrode for a given SMAW task.

**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 507-369-7222.

Disabilities page [http://southcentral.edu/academic-policies/disability-rights.html](http://southcentral.edu/academic-policies/disability-rights.html)
Curriculum Development Form — Modify an Existing Course

Course Designator, Number, Title and Number of Credits (i.e. ACCT 1800, Business Law, 3 cr)
WELD 1055 Intro to Oxy-Fuel Welding & Cutting (3 credits)  Change name to: WELD 1055 Brazing & Cutting

Date of Proposal: 2/18/2015  Author: Joe Volk
Course Contact: Joe Volk  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
The course is being: ☑ Modified  ☐ Deleted (complete Intention Form and obtain signatures)
Describe the modification and the rationale:

Change name to reflect plasma cutting, rather than oxy fuel

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

WELDING Certificate and WELDING Diploma

What impact will this modified course have on other program(s)?
none

Attach additional paperwork if necessary

As Faculty Developer, by signing this Modify an Existing 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
☑ Completed Intention Form
Continue the Curriculum Development Process
☑ COPY of existing CCO was used to make changes
☑ Double-checked:
  • 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)
☑ Verified 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 and proper structure on CCOs based on SCC example
☑ Proofread documentation for grammatical and typographical errors

Faculty Developer Signature  Date

As Primary Department Chair, by signing this Modify an Existing 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
For LAS (MnTC courses) — As a LAS Department Chair, by signing this Modify an Existing Course form, the Curriculum Committee is assured of the following (check marks required):

☐ 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 modified course proposal, faculty developer can elevate the proposal to AASC for resolution.

As Academic Dean/Director, by signing this Modify an Existing 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 modified course proposal, faculty developer can elevate the 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.

___________________________  3/18/15
Curriculum Committee Chair Signature                Date

___________________________  3-20-15
Vice President of Student and Academic Affairs Signature                Date
South Central College

WELD 1055* Cutting and Brazing [Introduction to Oxy-Fuel Welding and Cutting] (Copy)

Course Outcome Summary

Course Information

Description: An introduction to brazing and cutting safety with oxy-fuel and plasma equipment and supplies. Students will demonstrate correct procedures for using oxy-fuel equipment for cutting, brazing, and welding. Plasma cutting systems will also be utilized for cutting bends for weld coupons, cutting heavy plate, and cutting non-ferrous metals. Cutting will be done by hand, as well as track cutting, and rotating positioning equipment. (Prerequisite: None)

<table>
<thead>
<tr>
<th>Total Credits</th>
<th>3.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hours</td>
<td>60.00</td>
</tr>
</tbody>
</table>

Types of Instruction

<table>
<thead>
<tr>
<th>Instruction Type</th>
<th>Credits/Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>1 / 16</td>
</tr>
<tr>
<td>Lab</td>
<td>2 / 64</td>
</tr>
</tbody>
</table>

Pre/Corequisites

None

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.

Course Competencies

1. Explain fundamentals related to oxy-fuel welding and cutting.
   Learning Objectives
   - List the most common fuel gasses and their properties.
   - Classify fuels and filler metals.
   - Describe ferrous and nonferrous metals.

2. Describe equipment involved in oxy-fuel and plasma processes.
   Learning Objectives
List and label parts of Oxygen and Acetylene regulators.
Differentiate injection and equal pressure OA torch operation.
Discuss the system used to classify OF cutting and welding tips.
Identify the gasses involved with the creation of plasma

3. Describe the components of brazing and cutting systems.

Learning Objectives
Identify procedures for selecting appropriate fuels and materials.
Compare and contrast automated and manual processes in OF cutting and welding.
Describe what plasma is and how it is utilized in cutting.

4. Practice general safety in a lab setting.

Learning Objectives
Locate eye protection, eye wash, and emergency power kill switch.
Operate tools safely.

5. Demonstrate safety specific to oxy-fuel welding procedures.

Learning Objectives
Describe the proper pre-use safety inspection of equipment.
Identify safety standards regarding Thermal cutting & gouging.
Discuss the safe use and storage of high pressure and fuel gas cylinders.

6. Identify materials needed to perform brazing and cutting tasks.

Learning Objectives
Select proper oxyacetylene welding and cutting tips.
Identify proper welding consumables and fluxes for a selected process.

7. Determine an effective work plan to accomplish a given oxy-fuel welding assignment.

Learning Objectives
Select from multiple general weld joint configurations.
Choose the proper cutting process for various ferrous and non-ferrous materials.
Explain rationale for how and why a specific process was chosen.

8. Use equipment effectively to perform a given welding task.

Learning Objectives
Describe the proper set up of oxy-fuel equipment.
Set up oxy-fuel equipment as required to complete welding tasks.
Apply proper equipment settings and programs to weld on specific base metals.


Learning Objectives
Demonstrate manual cutting and beveling of mild steel plate and structural shapes.
Practice oxy-fuel machine cutting of plate.
Demonstrate oxy-fuel gouging and backing strip removal.
Operate wire and arc welders and oxyacetylene cutting torch.
Perform the proper steps in welding a multiple pass weldment.
Demonstrate the ability to set up and run a plasma cutter to cut a variety of ferrous and non-ferrous metals.
Remove broken off hardware.
Demonstrate the ability to disassemble and reassemble the plasma cutting head and identify consumables.
Demonstrate the ability to gouge and back-gouge V-grooves on mild steel plates.

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)

WELD 1065 Metallurgy (1 credit)

Date of Proposal: 2/18/2015  Author: Joe Volk  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

WELDING Certificate and WELDING Diploma

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

Describe the rationale for offering this new course:

based on advisory committee feedback

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  Feb 19, 2015

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  2-19-15

New Course Form — 12/9/14 — Page 1
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
☐ 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

WELD 1065* Metallurgy - new course

Course Outcome Summary

Course Information

| Total Credits | 1.00 |

Types of Instruction

<table>
<thead>
<tr>
<th>Instruction Type</th>
<th>Credits/Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>1/16</td>
</tr>
</tbody>
</table>

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.

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. Define the metallurgic eras of humanity and why they were important
   Learning Objectives
   Define the characteristics of copper
   Define the characteristics of bronze
   Define the characteristics of iron

2. Define how iron becomes steel and explain steel’s discovery
   Learning Objectives
   Explain steel’s discovery
   Define the characteristics of steel

3. Identify how ores are turned into useful metals
   Learning Objectives
   Define the temperatures to accomplish the transformation.
   Define different types of ores

4. Identify the compatibility of various metals and alloys
   Learning Objectives
   Identify steel alloys which are compatible
   Identify aluminum alloys which are compatible
   Identify properties of aluminum and iron costings

5. Identify basic crystalline structures
   Learning Objectives
   Austenite
Bainite
Martensite

6. **Identify the four basic heat treating methods**
   Learning Objectives
   - Annealing
   - Hardening
   - Normalizing
   - Tempering

7. **Identify the effects of alterations to metals**
   Learning Objectives
   - Define the effects of welding metals
   - Define the effects of heating metals
   - Define the effects of cutting metals

8. **Apply destructive and non-destructive testing of various joints in metal parts**
   Learning Objectives
   - Conduct destructive tests to welds
   - Conduct non-destructive tests to welds

**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)
WELD 1075 Advanced Welding Lab (4 credits)

Date of Proposal: 2/18/2015  Author: Joe Volk

Course Contact: Joe Volk  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

WELDING Certificate and WELDING Diploma

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

This class will allow students to gain more lab time practicing all of the types of welds they've been introduced to in previous classes. It will serve as a capstone of the program.

Describe the rationale for offering this new course:

based on advisory committee feedback

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

Feb 19, 2015

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

2-19-15
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):

<table>
<thead>
<tr>
<th>LAS Department Chair Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>LAS Department Chair Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>LAS Department Chair Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

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

☐ 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  3/6/15

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

WELD 1075* Advanced Welding Lab - new course

Course Outcome Summary

Course Information
Description: Advanced welding lab is a course that is designed to allow students to utilize all of their skills with capstone project based assignments that prepares students to get their American Welding Society credentials. Students can also focus on honing a particular skill of choice. (Pre-requisites: WELD 1006, WELD 1011 Co-requisites: WELD 1025, WELD 1035, WELD 1045, WELD 1055, WELD 1065)

Total Credits: 4.00
Total Hours: 128.00

Types of Instruction

<table>
<thead>
<tr>
<th>Instruction Type</th>
<th>Credits/Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab</td>
<td>4/128</td>
</tr>
</tbody>
</table>

Pre/Corequisites

WELD 1006
WELD 1011
WELD 1025
WELD 1035
WELD 1045
WELD 1055
WELD 1065

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.

Course Competencies

1. Design a blueprint to build a project to close tolerances

   Learning Objectives
   Sketch a blueprint
Use proper symbols

2. **Weld a variety of pipe sizes**
   
   **Learning Objectives**
   
   2G
   
   5G
   
   6G

3. **Conduct visual inspections of welds**
   
   **Learning Objectives**
   
   use measuring tools
   
   inspect key weld elements such as legsize, undercut, overlap, porosity, under fill, convexity, and general appearance

4. **Apply quality and safety concepts**
   
   **Learning Objectives**
   
   Ensure projects are free of spatter
   
   Ensure projects have all sharp edges and corners removed
   
   Ensure projects have all drilled holes finished by countersinking
   
   Ensure quality of appearance, placement, and consistency of welds.

5. **Display desirable employability skills**
   
   **Learning Objectives**
   
   Maintain good attendance
   
   Be punctual
   
   Utilize time well
   
   Engage in teamwork

6. **Demonstrate proper Shielded Metal Arc techniques**
   
   **Learning Objectives**
   
   Use proper electrodes for a given SMAW task
   
   Demonstrate single pass and multiple pass welding techniques
   
   Demonstrate proper rod manipulation techniques
   
   Inspect projects for quality

7. **Demonstrate proper cutting techniques**
   
   **Learning Objectives**
   
   Complete projects using cutting techniques
   
   Inspect projects for quality

8. **Demonstrate proper Gas Tungsten Arc welding techniques**
   
   **Learning Objectives**
   
   Complete projects using GTAW techniques
   
   Inspect welds for quality

9. **Demonstrate proper Gas Metal Arc welding techniques**
   
   **Learning Objectives**
   
   Complete projects using GMAW techniques
   
   Inspect projects for quality

10. **Demonstrate proper brazing techniques**
    
    **Learning Objectives**
    
    Complete welding projects using brazing techniques
    
    Inspect projects for quality

11. **Prepare for the American Welding Society certification**
    
    **Learning Objectives**
Define the test requirements
Complete practice tests

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

WELD 105 Welding Internship (2 credits)

Date of Proposal: 2/18/2015  Author: Joe Volk

Course Contact: Joe Volk  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://mntc.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

WELDING Diploma

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

This class will allow students to gain more experience practicing all of the types of welds they've been introduced to in previous classes.

Describe the rationale for offering this new course:

based on advisory committee feedback

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: Feb 19, 2015

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: 2-19-15
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):

_____________________________  3/18/15
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.

_____________________________  3/16/2015
Curriculum Committee Chair Signature  Date

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

New Course Form — 12/9/14 — Page 2
WELD 1085*  Welding Internship - new course

Course Outcome Summary

Course Information

Description: This course allows students the opportunity to put their welding skills to work. A learning contract will be developed between the student, work site, and college to identify the types of specific skills covered through this experiential learning opportunity. Students will gain industry work place experience while practicing the knowledge and skills they’ve learned in class. (Permission to register is required from the instructor)

Total Credits: 2.00
Total Hours: 87.00

Pre/Corequisites

Permission from instructor needed

Course Competencies

1. Demonstrate shop safety standards.
   Learning Objectives
   Identify shop safety issues.
   Follow all work site safety procedures.
   Wear protective welding helmet, gloves, and other gear necessary.

2. Inspect parts for quality.
   Learning Objectives
   Apply quality practices.
   Use key measurement terms.
   Adhere to company inspection standards and procedures.

3. Operate welding equipment to produce products.
   Learning Objectives
   Identify operating procedures for all equipment before using.
   Demonstrate proper machine/equipment/material use.

4. Acquire work in the related field of study.
   Learning Objectives
   Arrange a meeting and interview with prospective employer.
   Complete hours necessary for internship.

5. Complete internship paperwork.
   Learning Objectives
   Complete and sign internship paperwork.
   List daily work experiences.
   Complete and mail weekly forms.

6. Demonstrate good work habits while on the internship.
Learning Objectives
Demonstrate a positive attitude while working at the internship site and customer's home.
Respect the property of the customer and employer.
Accept responsibility, be honest, and on time for work.
Clean up after completion of each job.

7. Write a report on experiences of the internship.

Learning Objectives
Summarize what took place during your summer internship.
List some improvements that could be made to the internship program.
Identify what can be done here at SCC to improve the internship experience.

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