Curriculum Committee Meeting Agenda

Voting Committee Members
Chair – Andrea LoMonaco (Business)
Vice Chair – Pam Koop (Math)

Ashley Beardmore (Science)
Kristen Booth (Pre-Coll/ESOL)
Leigh Hancock (Art/Comm)
Mimi Pentz (Nurs/Hlth Occ)
Stephen Shwiff (Soc Sci & Ed)
Tori Stanek (Inst Dean/Dir)
Robert Wells-Clark (Tec/Trad)

Non-Voting Committee Members
Jarett Gilbert (VP Instructional Services)
Susan Lewis (Curriculum)
Jared Dill (Student Services)

Support Staff
Sara Wade (Instructional Services)

Guests

October 10, 2024 3:30 – 5:00 pm
The Dalles Campus, room 1.162 (Board Room, Building 1 next to cafe)
Hood River Center, room 1.209 (conference room)
Zoom log-in: https://cgcc.zoom.us/j/86457853619; Meeting ID: 864 5785 3619; phone in: 1-253-215-8782

Information items: none

Old Business:

1. General Education requirements for AAS degrees – MOVED TO DISCUSSION ITEMS

Welcome New Committee Members: Ashley Beardmore (Science), Leigh Hancock (Art/Comm)

Approval of September 19, 2024 minutes[1] (Andrea)

Submissions[2]

1. Robert Wells-Clark (3:45 – 4:15pm)

   (CCOGs for courses articulated to licenses are included following all the licensure articulation forms for your reference)
   - Autodesk CAM for 2.5 Axis Milling – Licensure Articulation
   - Autodesk Certified Professional in CAM for 3 Axis Milling – Licensure Articulation
   - AWS D1.1 3G GMAW or SMAW Mild Steel – Licensure Articulation
   - AWS D1.1 4G, SMAW or GMAW Mild Steel – Licensure Articulation
   - AWS D1.2 2G GTAW Aluminum – Licensure Articulation
   - AWS D1.2G SMAW, GMAW Mild Steel – Licensure Articulation
   - AWS D1.6 GTAW 2G Stainless Steel – Licensure Articulation
   - Haas Basic Mill – Licensure Articulation
   - Mastercam 2D Mill – Licensure Articulation
   - Mastercam 3D Mill – Licensure Articulation

2. Pam Koop (4:15 – 4:25pm)

   (Coreq designator directive from the Oregon Presidents Council is entered for your reference)
   - MTH 140 Mathematics and Games (New LDC Course)
   - MTH 105L Corequisite for Math in Society (Course Revision: #)
   - MTH 111L Corequisite for Precalculus I: Functions (Course Revision: #)
   - STAT 243L Corequisite for Elementary Statistics I (Course Revision: #)

3. Leigh Hancock (4:25 – 4:30pm)
   - IRW 115L Corequisite for Critical Reading and Writing (Course Revision: #, title, des, out)
   - WR 121L Corequisite for Composition I (Course Revision: #)

New Business

1. None

Discussion Items

2. General Education requirements for AAS degrees (continued from 9.19.24)

Next Meeting: October 24, 2024
Attachments: [1] September 19, 2024 Minutes; [2] Submissions: 10 Licensure Articulations, 1 New LDC, 5 Course Revisions; [3] Related Instruction AR

Curriculum Committee Minutes
September 19, 2024 – Orientation
Location: TDC Boardroom 1.162

PRESENT:

Voting Committee Members

Chair- Andrea LoMonaco (Business)
Vice Chair- Pam Koop (Math)
Mimi Pentz (Nursing/Health)
Kristen Booth (Pre-College)
Robert Wells-Clark (Ind/Trade)
Stephen Shwiff (Social Science)
Vacant (Science)
Vacant (Art,Cult,Comm)
Tori Stanek (Inst Dean)

Non-Voting Committee Members

Susan Lewis (Curriculum)
Jared Dill (Student Services)

Guests

Supporting Staff

Sara Wade (Instructional Services)

ABSENT

Voting Members

Non-Voting Committee Members

Jarett Gilbert (VP Instructional Services

Item	Discussion	Action
Call to Order: 10:03 pm	Meeting was called to order at 10:03am by Andrea LoMonaco.	
Election of Vice-Chair for 2024-25	Pam Koop was elected to Vice Chair by a Rock Paper Scissor battle between Mimi and anonymous committee vote. **Pam is 2024-25 Vice Chair!**	6 in favor – 0 opposed – 0 abstains
Review of Committee Procedural Rules	Susan reviewed the Procedural Rules of the Curriculum Committee. • Attendance reminder, please try to attend all scheduled meetings for the 2024-25 Academic Year. You are the representative for your departments and it is your	

	responsibility to relay information back to your departments. o If you can not make it contact via email the Curriculum Committee Chair & CC in Susan Lewis & Sara Wade. • Pre-read agenda & submissions prior to the scheduled meeting. o Adjuncts get paid up to 5 hours at special project rate of Curriculum Committee work. • Listen & be respectful of other Curriculum Committee members, guests, and others opinions, feelings & thoughts. • Go back to your departments & share information and discuss items that have came to the Curriculum Committee. • It is completely okay to not agree or question with your own departments' submission. • Susan reminded the committee members of her role within the Curriculum Committee. o It is the responsibility of the members of the Curriculum Committee to look at each submission find mistakes, have questions. Don't rely or expect Susan to be able point things out or catch everything that could be wrong or needing correction in submissions.	
Anticipated Submissions for 2024-25	Susan shared possible submissions for 2024-25: • New Math course on gaming • Manufacturing CPL Licensures rolled over from 2023-24 AY • Mandatory FYE & corequisites • HECC request to start changing all course numbers that end in "80" as it is designated for CWE courses. • Possible PSY, COMM, HDFS MTMs coming in from the state committees. • Move in EMS to competency-based assessment & requirements to change EMS 105 & 106. • Paramedic Program- partnering/contracting with Chemeketa • AG Tech updates	
Review of Submission Requirements	• Updates on submission forms	

	• Reminders of the submission due dates for Curriculum Committee, which can be found on the college's website (cgcc.edu/curriculum)	
Discussion Items:		
Contact Hour Definitions • Revise approach to a single understanding of Contact Hours? • Build a Moodle Shell for instructors, providing online teaching strategies, opportunities for sharing and discussing ideas?	There has been some discussion from different department members and department chairs around contact hours. These discussions have sparked the question if there needs to be a college wide policy around Contact Hours and what the baseline for the number of Contact Hours for all modalities. Possible options included: • 1 hour of direct instruction & 2 hours of indirect instruction • Possibility of just having 3 hours of instruction Committee agreed to all do research on how different community colleges determine contact hours. As well as taking the discussion to IC to have the idea of a college wide policy created for contact hours.	
Mandatory FYE • Start with transfer degrees (AAOT, AS, ASOT-BUS, ASG, MTMs)	An update around what was happening with FYE: • FYE Committee is still researching how CGCC can mandate this course to all new students • FYE has a new coordinator to help streamline and support the FYE students not only in the first term but through out their complete first year. As well as bridge the gap between Student Services & Instructional Services around students needs. • Discussion on how FYE might be or could be helpful to students on Oregon Promise as it might fulfill a requirement for students, Jared Dill, Student Services will be looking more into this. • Thought that the submission should come from the IC, using the format that has been used for other such submissions that impact multiple degrees (standard prereq revision, additional COMM options for general degrees, etc). Tori will spearhead this.	
General Education Requirements for AAS Degrees	Continued discussions about lowering the number of Gen Ed requirements for AAS degrees.	

• Decrease required Gen Ed from 16 credits to 12 credits • Replace Gen Ed requirements with Related Instruction requirements	• Concern that programs are mapped for 15+ credits each term. This is a burden to students as the maximum amount of financial per term is based on 12 credits. • Would dropping the Gen Ed requirements down 4 credits help with the financial aid issue? The total number of credits required for an AAS degree is 90 credits. If GE credits were removed and the total fell below 90, additional credits would have to be added back in. So, GE is not responsible for financial aid challenges. If students are to complete a 90-credit degree in 6 terms, they will need to average 15 credits per term. • Discussion around options for rebalancing credits so that students would only need to take 12 credits per term: include one or two summer terms; extend for a third year. • However, if GE credits were lowered, it would leave more room for adding more technical courses. • Discussion around Tech & Trade and the challenges that students are facing • Committee Members will look further into 3 course Gen Ed o Research to see if this would even be viable option o Research GE credit loads at other colleges o Review purpose of GE and the ability to cover GE content in less credits. ILO assessment committee is already discussing a shortage of instruction for two of the ILOs. o Read the college's AR around Related Instruction to determine in RI is a possible alternative.	
Meeting Adjourned: 12:05pm	**Andrea brought the meeting to an end at 12:05pm. All in favor.**	**Next Meeting: October 10, 2024**

CC date 10.10.24
CC decision _____
CC vote _____

Columbia Gorge Community College

Credit for Prior Learning (CPL)
Acceptance of Licensure/Certification Request

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	AMF	Submitter name: phone: email:	Robert Wells-Clark, Chris Dodson rclark@cgcc.edu, cdodson@cgcc.edu
License/Certification Title:	CAM for 2.5 Axis Milling	Granting Institution(s)/Agency(s):	Autodesk
Course Equivalency:	Course Title(s):	MFG 220	
	Credits:	3	
Potential application to current awards:	Associate of Applied Science: Advanced Manufacturing and Fabrication		

SECTION #2 OUTCOMES AND CONTENT ALIGNMENT	
Alignment of Licensure/Certification requirements to course outcomes:	(Enter course description and list all course outcomes [by each course if more than one course] and provide a bulleted outline for each outcome showing how licensure/certification requirements address/fulfill those outcomes.) Introduces use of whole shop production methods for producing parts and assemblies. Describes the use of math and lean manufacturing principles to streamline production and prototyping in the industrial environment. Prerequisites: MFG 157. Audit available. • Produce complex products from scratch fully utilizing shop equipment. – Covered as part of the testing process for this certificate. • Understand lean manufacturing principles. – Covered as part of the testing proess for this certificate. • Develop labor and cost estimating strategies based on prevailing wage. – Covered as part of the testing process for this certificate. • Explore machining processes for production fabrication. – Covered as part of the testing process for this certificate.
Other:	(List any course requirements that may exist beyond learning outcomes. Describe how the licensure/certification ensures that the requirement is addressed/fulfilled. For example, if the course requires a specific # of clinical hours, include licensure/certification requirements that show that the hours required have been fulfilled/addressed. Course requisite requirements are not applicable to licensure/certification CPL approval.)

SECTION #3 IMPLEMENTATION	
Implementation term:	☐ Start of next academic year (summer term) ☐ Specify term (if BEFORE start of next academic year):
Curriculum Committee and VPIS approval is all that is required for the recognition of the submitted licensure/certifications as CPL. Therefore, once this has occurred, students may apply for CPL for the courses aligned with the approved licensure/certificate immediately.	

SECTION #4 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean/director."		
Submitter	Email	Date
Robert Wells-Clark	rclark@cgcc.edu	10.4.24
Department Chair (enter name of department chair):		
Department Dean/Director (enter name of department dean/director):		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the curriculum office may review and provide feedback.
3. Course submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review, and you will be sent a signature page that may be completed electronically or manually by your department chair and department dean. It is the submitter's responsibility to ensure that completed signature pages are delivered to the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
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CC date 10.10.24
CC decision _____
CC vote _____

Columbia Gorge Community College

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Acceptance of Licensure/Certification Request

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	AMF	Submitter name: phone: email:	Robert Wells-Clark, Chris Dodson rclark@cgcc.edu, cdodson@cgcc.edu
License/Certification Title:	Autodesk Certified Professional in CAM for 3 Axis Milling	Granting Institution(s)/Agency(s):	Autodesk
Course Equivalency:	Course Title(s):	MFG 221, 222	
	Credits:	6	
Potential application to current awards:	Associate of Applied Science: Advanced Manufacturing and Fabrication		

SECTION #2 OUTCOMES AND CONTENT ALIGNMENT	
Alignment of Licensure/Certification requirements to course outcomes:	(Enter course description and list all course outcomes [by each course if more than one course] and provide a bulleted outline for each outcome showing how licensure/certification requirements address/fulfill those outcomes.) MFG 221 Explores CNC operations processes and their role in creating a product from Solid 3d modeling. Utilizes numerous systems of control and manufacturing processes to create streamlined research and development and rapid prototype products for testing. Prerequisite MFG 220. Audit available. • Understand CNC operation and programming. – Covered as part of the testing process for this certificate. • Demonstrate knowledge of feed speed and circular interpolation. – Covered as part of the testing process for this certificate. • Produce product from existing 3d solid model and tolerance. – Covered as part of the testing process for this certificate. • Create and assemble multi-part assemblies produced from CNC equipment. – Covered as part of the testing process for this certificate. MFG222 Combines the use of CNC technology and other metalworking and welding techniques to create a simulated production fabrication environment from design to prototype. Utilizes numerous integrated math and technology aspects to accurately produce products. Explores manufacturing problem solving and critical thinking. Prerequisites: MFG 221. Audit available. • Design a blueprint and assembly drawing of a product that requires a fabrication solution. – Covered as part of the testing process for this certificate.

	• Create a prototype from blueprint and do real world testing to check design. – Covered as part of the testing process for this certificate. • Fabricate a product that is production ready. – Covered as part of the testing process for this certificate. • Produce a fixture for production fabrication utilizing lean practices and CNC machining efficiency. – Covered as part of the testing process for this certificate. • Run a production run of a product. – Covered as part of the testing process for this certificate.
Other:	(List any course requirements that may exist beyond learning outcomes. Describe how the licensure/certification ensures that the requirement is addressed/fulfilled. For example, if the course requires a specific # of clinical hours, include licensure/certification requirements that show that the hours required have been fulfilled/addressed. Course requisite requirements are not applicable to licensure/certification CPL approval.)

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Submitter	Email	Date
Robert Wells-Clark	rclark@cgcc.edu	10.4.24
Department Chair (enter name of department chair):		
Department Dean/Director (enter name of department dean/director):		

NEXT STEPS:

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Columbia Gorge Community College

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SECTION #1 GENERAL INFORMATION			
Department:	AMF	Submitter name: phone: email:	Robert Wells-Clark, rclark@cgcc.edu
License/Certification Title:	AWS D1.1 3G GMAW or SMAW Mild Steel, Expired Ok	Granting Institution(s)/Agency(s):	American Welding Society
Course Equivalency:	Course Title(s):	MFG 195, MFG150	
	Credits:	6	
Potential application to current awards:	• Associate of Applied Science: Advanced Manufacturing and Fabrication • Manufacturing certificate • Advanced Manufacturing Technology certificate		

SECTION #2 OUTCOMES AND CONTENT ALIGNMENT	
Alignment of Licensure/Certification requirements to course outcomes:	(Enter course description and list all course outcomes [by each course if more than one course] and provide a bulleted outline for each outcome showing how licensure/certification requirements address/fulfill those outcomes.) MFG 195 Introduces the operation of equipment and tools used in standard welding and manufacturing shops. Identifies procedures, practices and skills used by welders including commonly used welding machines and the equipment used to cut and finish material. Audit available. • Apply welding industry safety standards – Will be known by operator who holds this licensure as these safety standards are required to take the test. • Demonstrate industry standard basic and commonly welded joints and positions – The blueprint for the test procedure requires these skills • Perform SMAW Position 1 and 2, G and F (groove and fillet) joints to apprentice level of welding – These processes are superseded by this licensure and co-awarded. • Perform GMAW/MIG Position 1and2,G and F (groove and fillet) joints to apprentice level of welding - These processes are superseded by this licensure and co-awarded. • Identify tools and equipment used in the welding industry and apply their appropriate use – This would be required to complete the test. • Research welding careers and the requirements of the profession – The test taker will have already had a career in field to need to take this test. MFG150 Introduces basic manufacturing processes used in industry. Expands on joints learned in MFG195 to out of position welding joints. Emphasizes weld quality,

	joint quality and measurement tolerances for welding processes used in industry. Introduces additional tools used in welding trades. Prerequisite/concurrent: MFG 195. Audit available. • Demonstrate knowledge of intermediate and advanced welding joints- This would be required to set up the plate for taking the test. • Identify and diagnose common weld errors and their corrections – This is covered by the test. • Perform SMAW position 3 G and F welds to an apprentice level of welding – This is covered by the test. • Perform GMAW position 3 G and F welds to an apprentice level of welding – This is covered by the Test • Create and weld appropriate joints for common manufacturing processes – This skill is required to set up the test. • Identify and precisely use commonly used manufacturing tooling – This is required to prepare the plate for the test, and process the plate for bending after the weldment part of the test is take.
Other:	(List any course requirements that may exist beyond learning outcomes. Describe how the licensure/certification ensures that the requirement is addressed/fulfilled. For example, if the course requires a specific # of clinical hours, include licensure/certification requirements that show that the hours required have been fulfilled/addressed. Course requisite requirements are not applicable to licensure/certification CPL approval.)

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Robert Wells-Clark	rclark@cgcc.edu	10.4.24
Department Chair (enter name of department chair):		
Department Dean/Director (enter name of department dean/director):		

NEXT STEPS:

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SECTION #1 GENERAL INFORMATION			
Department:	AMF	Submitter name: phone: email:	Robert Wells-Clark, rclark@cgcc.edu
License/Certification Title:	AWS D1.1 4G, SMAW or GMAW Mild Steel, Expired Ok	Granting Institution(s)/Agency(s):	American Welding Society
Course Equivalency:	Course Title(s):	MFG 195, 150, 151	
	Credits:	9	
Potential application to current awards:	• Associate of Applied Science: Advanced Manufacturing and Fabrication • Manufacturing certificate • Advanced Manufacturing Technology certificate		

SECTION #2 OUTCOMES AND CONTENT ALIGNMENT	
Alignment of Licensure/Certification requirements to course outcomes:	(Enter course description and list all course outcomes [by each course if more than one course] and provide a bulleted outline for each outcome showing how licensure/certification requirements address/fulfill those outcomes.) MFG 195 Introduces the operation of equipment and tools used in standard welding and manufacturing shops. Identifies procedures, practices and skills used by welders including commonly used welding machines and the equipment used to cut and finish material. Audit available. • Apply welding industry safety standards – Will be known by operator who holds this licensure as these safety standards are required to take the test. • Demonstrate industry standard basic and commonly welded joints and positions – The blueprint for the test procedure requires these skills • Perform SMAW Position 1 and 2, G and F (groove and fillet) joints to apprentice level of welding – These processes are superseded by this licensure and co-awarded. • Perform GMAW/MIG Position 1and2,G and F (groove and fillet) joints to apprentice level of welding - These processes are superseded by this licensure and co-awarded. • Identify tools and equipment used in the welding industry and apply their appropriate use – This would be required to complete the test. • Research welding careers and the requirements of the profession – The test taker will have already had a career in field to need to take this test.

	MFG150 Introduces basic manufacturing processes used in industry. Expands on joints learned in MFG195 to out of position welding joints. Emphasizes weld quality, joint quality and measurement tolerances for welding processes used in industry. Introduces additional tools used in welding trades. Prerequisite/concurrent: MFG 195. Audit available. • Demonstrate knowledge of intermediate and advanced welding joints- This would be required to set up the plate for taking the test. • Identify and diagnose common weld errors and their corrections – This is covered by the test. • Perform SMAW position 3 G and F welds to an apprentice level of welding – This is covered by the test. • Perform GMAW position 3 G and F welds to an apprentice level of welding – This is covered by the Test • Create and weld appropriate joints for common manufacturing processes – This skill is required to set up the test. • Identify and precisely use commonly used manufacturing tooling – This is required to prepare the plate for the test, and process the plate for bending after the weldment part of the test is take. MFG 151 Builds on fabrication principles started in MFG 150 and adds Pos 4 welding on mild steel in groove and fillet fitments. Focuses on scientific principles that effect weld outcomes and how those principles can be used by welders to ensure quality weld and fabrication outcomes. Teaches use of Oxy-Fuel cutting equipment. Prerequisites: MFG 150. Audit available. • Create Position 4 Fillet weldments using SMAW and GMAW processes for destructive testing as per AWS D1.1 code. – This is covered by the test. • Create Position 4 Groove weldments using SMAW and GMAW processes for destructive testing as per AWS D1.1 code. – This is covered by the test. • Accurately account for welding warp in mild steel processes. – This is required to pass the test. • Demonstrate knowledge of heat affected zone chemistry and its practical considerations in welding. – This is demonstrated by passing the test. • Use Oxygen-Fuel cutting techniques to process and handle materials in a fabrication environment. – This is used to prepare plates for the test. • Apply the technical skills and math needed to carry out correct joint preparation and fit-up. – This is demonstrated through the cutting of angles and setup of the plate accurately to take the test, and is inspected prior to the test being welded.
Other:	(List any course requirements that may exist beyond learning outcomes. Describe how the licensure/certification ensures that the requirement is addressed/fulfilled. For example, if the course requires a specific # of clinical hours, include licensure/certification requirements that show that the hours required have been fulfilled/addressed. Course requisite requirements are not applicable to licensure/certification CPL approval.)

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Submitter	Email	Date
Robert Wells-Clark	rclark@cgcc.edu	10.4.24
Department Chair (enter name of department chair):		
Department Dean/Director (enter name of department dean/director):		

NEXT STEPS:

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CC date 10.10.24
CC decision _____
CC vote _____

Columbia Gorge Community College

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Acceptance of Licensure/Certification Request

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	AMF	Submitter name: phone: email:	Robert Wells-Clark / rclark@cgcc.edu
License/Certification Title:	AWS D1.2 2G GTAW Aluminum, Expired OK	Granting Institution(s)/Agency(s):	American Welding Society
Course Equivalency:	Course Title(s):	MFG 281	
	Credits:	3	
Potential application to current awards:	• Associate of Applied Science: Advanced Manufacturing and Fabrication • Manufacturing certificate • Advanced Manufacturing Technology certificate		

SECTION #2 OUTCOMES AND CONTENT ALIGNMENT	
Alignment of Licensure/Certification requirements to course outcomes:	(Enter course description and list all course outcomes [by each course if more than one course] and provide a bulleted outline for each outcome showing how licensure/certification requirements address/fulfill those outcomes.) Builds on the knowledge of MFG 280 by beginning structural code welding practice and deepening knowledge of GTAW AC processes as they pertain to welding aluminum and alloys. Provides experience creating multipart assemblies as in a production manufacturing environment. Corequisites: MFG 280. Audit available. • Create Position 2 Fillet weldments using AC GTAW processes suitable for destructive testing as per AWS D1.2 code. – Superseded by the test required for this certification. • Create Position 2 Groove weldments using AC GTAW processes suitable for destructive testing as per AWS D1.2 code. – This is the same as the above test for certification. • Identify and recognize the oxidation processes of aluminum components as they pertain to weld quality. – Without this knowledge, the welder would not be able to pass the certification test. • Identify common GTAW AC weld errors and their corrections. – This is proven by holding the certification. • Demonstrate knowledge of procedural changes needed for welding different alloys of aluminum. – This is required knowledge to pass the test. • Create multi-part assemblies from aluminum components with attention to tolerance and appropriate interpretation of a weld process sheet (WPS). – The test is a multi-part assembly with 1/32” tolerance, and includes a WPS.

Other:	(List any course requirements that may exist beyond learning outcomes. Describe how the licensure/certification ensures that the requirement is addressed/fulfilled. For example, if the course requires a specific # of clinical hours, include licensure/certification requirements that show that the hours required have been fulfilled/addressed. Course requisite requirements are not applicable to licensure/certification CPL approval.)

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Submitter	Email	Date
Robert Wells-Clark	rclark@cgcc.edu	10.4.24
Department Chair (enter name of department chair):		
Department Dean/Director (enter name of department dean/director):		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
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CC date 10.10.24
CC decision _____
CC vote _____

Columbia Gorge Community College

Credit for Prior Learning (CPL)
Acceptance of Licensure/Certification Request

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	AMF	Submitter name: phone: email:	Robert Wells-Clark / rclark@cgcc.edu
License/Certification Title:	D1.2G SMAW, GMAW Mild Steel, Expired ok	Granting Institution(s)/Agency(s):	American Welding Society
Course Equivalency:	Course Title(s):	MFG 195	
	Credits:	3	
Potential application to current awards:	• Associate of Applied Science: Advanced Manufacturing and Fabrication • Manufacturing certificate • Advanced Manufacturing Technology certificate		

SECTION #2 OUTCOMES AND CONTENT ALIGNMENT	
Alignment of Licensure/Certification requirements to course outcomes:	(Enter course description and list all course outcomes [by each course if more than one course] and provide a bulleted outline for each outcome showing how licensure/certification requirements address/fulfill those outcomes.) MFG 195 Introduces the operation of equipment and tools used in standard welding and manufacturing shops. Identifies procedures, practices and skills used by welders including commonly used welding machines and the equipment used to cut and finish material. Audit available. • Apply welding industry safety standards – Will be known by operator who holds this licensure as these safety standards are required to take the test. • Demonstrate industry standard basic and commonly welded joints and positions – The blueprint for the test procedure requires these skills • Perform SMAW Position 1 and 2, G and F (groove and fillet) joints to apprentice level of welding – These processes are superseded by this licensure and co-awarded. • Perform GMAW/MIG Position 1and2,G and F (groove and fillet) joints to apprentice level of welding - These processes are superseded by this licensure and co-awarded. • Identify tools and equipment used in the welding industry and apply their appropriate use – This would be required to complete the test. • Research welding careers and the requirements of the profession – The test taker will have already had a career in field to need to take this test.

Other:	(List any course requirements that may exist beyond learning outcomes. Describe how the licensure/certification ensures that the requirement is addressed/fulfilled. For example, if the course requires a specific # of clinical hours, include licensure/certification requirements that show that the hours required have been fulfilled/addressed. Course requisite requirements are not applicable to licensure/certification CPL approval.)

SECTION #3 IMPLEMENTATION	
Implementation term:	☐ Start of next academic year (summer term) ☐ Specify term (if BEFORE start of next academic year):
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Department Chair (enter name of department chair):		
Department Dean/Director (enter name of department dean/director):		

NEXT STEPS:

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Columbia Gorge Community College

Credit for Prior Learning (CPL)
Acceptance of Licensure/Certification Request

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SECTION #1 GENERAL INFORMATION			
Department:	AMF	Submitter name: phone: email:	Robert Wells-Clark / rclark@cgcc.edu
License/Certification Title:	D1.6 GTAW 2G Stainless Steel, Expired Ok	Granting Institution(s)/Agency(s):	American Welding Society
Course Equivalency:	Course Title(s):	MFG285	
	Credits:	3	
Potential application to current awards:	• Associate of Applied Science: Advanced Manufacturing and Fabrication • Manufacturing certificate • Advanced Manufacturing Technology certificate		

SECTION #2 OUTCOMES AND CONTENT ALIGNMENT	
Alignment of Licensure/Certification requirements to course outcomes:	(Enter course description and list all course outcomes [by each course if more than one course] and provide a bulleted outline for each outcome showing how licensure/certification requirements address/fulfill those outcomes.) Builds on the skills learned in MFG 285 by introducing welding to AWS code for stainless steel alloys. Introduces fabrication of stainless steel assemblies and the different procedural and prep changes for different stainless steel alloys. Presents AWS tolerances in color and purity in stainless steel welding, and experiments with a range of outcomes and how they differ both practically and chemically. Prerequisites: MFG 285. Audit available. • Create Position 2 Fillet weldments using DC GTAW processes suitable for destructive testing as per AWS D1.6 code. – Superseded by the test required for this certification. • Create Position 2 Groove weldments using DC GTAW processes suitable for destructive testing as per AWS D1.6 code. - This is the same as the above test for certification. • Manufacture stainless steel multi-part assemblies. – The test assembled by the welder is a multi-part assembly. • Identify weld errors in stainless steel DC GTAW welding and necessary corrections. – This knowledge is demonstrated by holding the certification. • Recognize and explain changes in procedure when dealing with different stainless steel alloys. – This knowledge is demonstrated by holding the certification. • Demonstrate knowledge of AWS acceptable color and surface tolerances and the procedural relationship of those colors and surfaces to process.- This knowledge is demonstrated by holding the certification.

Other:	(List any course requirements that may exist beyond learning outcomes. Describe how the licensure/certification ensures that the requirement is addressed/fulfilled. For example, if the course requires a specific # of clinical hours, include licensure/certification requirements that show that the hours required have been fulfilled/addressed. Course requisite requirements are not applicable to licensure/certification CPL approval.)

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Columbia Gorge Community College

Credit for Prior Learning (CPL)
Acceptance of Licensure/Certification Request

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	AMF	Submitter name: phone: email:	Robert Wells-Clark, Chris Dodson rclark@cgcc.edu, cdodson@cgcc.edu
License/Certification Title:	Haas Basic Mill	Granting Institution(s)/Agency(s):	Haas Automation
Course Equivalency:	Course Title(s):	MFG 220	
	Credits:	3	
Potential application to current awards:	Associate of Applied Science: Advanced Manufacturing and Fabrication		

SECTION #2 OUTCOMES AND CONTENT ALIGNMENT	
Alignment of Licensure/Certification requirements to course outcomes:	(Enter course description and list all course outcomes [by each course if more than one course] and provide a bulleted outline for each outcome showing how licensure/certification requirements address/fulfill those outcomes.) Introduces use of whole shop production methods for producing parts and assemblies. Describes the use of math and lean manufacturing principles to streamline production and prototyping in the industrial environment. Prerequisites: MFG 157. Audit available. • Produce complex products from scratch fully utilizing shop equipment. – Covered as part of the testing process for this certificate. • Understand lean manufacturing principles. – Covered as part of the testing proess for this certificate. • Develop labor and cost estimating strategies based on prevailing wage. – Covered as part of the testing process for this certificate. • Explore machining processes for production fabrication. – Covered as part of the testing process for this certificate.
Other:	(List any course requirements that may exist beyond learning outcomes. Describe how the licensure/certification ensures that the requirement is addressed/fulfilled. For example, if the course requires a specific # of clinical hours, include licensure/certification requirements that show that the hours required have been fulfilled/addressed. Course requisite requirements are not applicable to licensure/certification CPL approval.)

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Robert Wells-Clark	rclark@cgcc.edu	10.4.24
Department Chair (enter name of department chair):		
Department Dean/Director (enter name of department dean/director):		

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Columbia Gorge Community College

Credit for Prior Learning (CPL)
Acceptance of Licensure/Certification Request

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	AMF	Submitter name: phone: email:	Robert Wells-Clark, Chris Dodson rclark@cgcc.edu, cdodson@cgcc.edu
License/Certification Title:	Mastercam 2D Mill	Granting Institution(s)/Agency(s):	Mastercam
Course Equivalency:	Course Title(s):	MFG 220	
	Credits:	3	
Potential application to current awards:	Associate of Applied Science: Advanced Manufacturing and Fabrication		

SECTION #2 OUTCOMES AND CONTENT ALIGNMENT	
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Other:	(List any course requirements that may exist beyond learning outcomes. Describe how the licensure/certification ensures that the requirement is addressed/fulfilled. For example, if the course requires a specific # of clinical hours, include licensure/certification requirements that show that the hours required have been fulfilled/addressed. Course requisite requirements are not applicable to licensure/certification CPL approval.)

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Robert Wells-Clark	rclark@cgcc.edu	10.4.24
Department Chair (enter name of department chair):		
Department Dean/Director (enter name of department dean/director):		

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Columbia Gorge Community College

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(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION			
Department:	AMF	Submitter name: phone: email:	Robert Wells-Clark, Chris Dodson rclark@cgcc.edu, cdodson@cgcc.edu
License/Certification Title:	Mastercam 3D Mill	Granting Institution(s)/Agency(s):	Mastercam
Course Equivalency:	Course Title(s):	MFG 221, 222	
	Credits:	6	
Potential application to current awards:	Associate of Applied Science: Advanced Manufacturing and Fabrication		

SECTION #2 OUTCOMES AND CONTENT ALIGNMENT	
Alignment of Licensure/Certification requirements to course outcomes:	(Enter course description and list all course outcomes [by each course if more than one course] and provide a bulleted outline for each outcome showing how licensure/certification requirements address/fulfill those outcomes.) MFG 221 Explores CNC operations processes and their role in creating a product from Solid 3d modeling. Utilizes numerous systems of control and manufacturing processes to create streamlined research and development and rapid prototype products for testing. Prerequisite MFG 220. Audit available. • Understand CNC operation and programming. – Covered as part of the testing process for this certificate. • Demonstrate knowledge of feed speed and circular interpolation. – Covered as part of the testing process for this certificate. • Produce product from existing 3d solid model and tolerance. – Covered as part of the testing process for this certificate. • Create and assemble multi-part assemblies produced from CNC equipment. – Covered as part of the testing process for this certificate. MFG222 Combines the use of CNC technology and other metalworking and welding techniques to create a simulated production fabrication environment from design to prototype. Utilizes numerous integrated math and technology aspects to accurately produce products. Explores manufacturing problem solving and critical thinking. Prerequisites: MFG 221. Audit available. • Design a blueprint and assembly drawing of a product that requires a fabrication solution. – Covered as part of the testing process for this certificate. • Create a prototype from blueprint and do real world testing to check design.

	– Covered as part of the testing process for this certificate. • Fabricate a product that is production ready. – Covered as part of the testing process for this certificate. • Produce a fixture for production fabrication utilizing lean practices and CNC machining efficiency. – Covered as part of the testing process for this certificate. • Run a production run of a product. – Covered as part of the testing process for this certificate.
Other:	(List any course requirements that may exist beyond learning outcomes. Describe how the licensure/certification ensures that the requirement is addressed/fulfilled. For example, if the course requires a specific # of clinical hours, include licensure/certification requirements that show that the hours required have been fulfilled/addressed. Course requisite requirements are not applicable to licensure/certification CPL approval.)

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Department Dean/Director (enter name of department dean/director):		

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Manufacturing Processes

Course Number: MFG 150

Transcript Title: Manufacturing Processes

Created: Aug 11, 2022

Updated: Jul 12, 2023

Total Credits: 3

Lecture Hours: 0

Lecture / Lab Hours: 60

Lab Hours: 0

Satisfies Cultural Literacy requirement: No

Satisfies General Education requirement: No

Grading Options A-F, P/NP, Audit

Default Grading Options A-F

Repeats available for credit: 0

Prerequisites

Prerequisite / Concurrent

MFG 195 (/courses/mfg-195)

Course Description

Introduces basic manufacturing processes used in industry. Expands on joints learned in MFG195 to out of position welding joints. Emphasizes weld quality, joint quality and measurement tolerances for welding processes used in industry. Introduces additional tools used in welding trades. Prerequisite/concurrent: MFG 195. Audit available.

Course Outcomes

Upon successful completion of this course, students will be able to:

1. Demonstrate knowledge of intermediate and advanced welding joints
2. Identify and diagnose common weld errors and their corrections
3. Perform SMAW position 3 G and F welds to an apprentice level of welding
4. Perform GMAW position 3 G and F welds to an apprentice level of welding
5. Create and weld appropriate joints for common manufacturing processes
6. Identify and precisely use commonly used manufacturing tooling

Suggested Outcome Assessment Strategies

Assessment for this course is based upon destructive and visual testing of the intermediate weld joints produced by students. Students must identify the cause of these weld errors and correct them to industry specification. Assessments are a mix of quizzes and visual inspections of previous welds, as well as diagnosis of their own and their classmates welds. Projects created by students will be checked to specification and tolerance according to industry standard including pre-inspection before welding to check joint fit up quality. A rubric including tolerances will be used to assign a value to each assessment.

Course Activities and Design

The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Course Content

Outcome #1: Demonstrate knowledge of intermediate and advanced welding joints

- Read and understand technical documents pertaining to weld joint design
- Determine the correct process for welding intermediate and advanced welding joints
- Understand how to differentiate contour, type and quality

Outcome #2: Identify and diagnose common weld errors and their corrections

- Make corrective action based on visual feedback from welds
- Determine weld error from destructive testing procedure and correct
- Cut and etch welds and make a determination of overall quality
- Understand weld heat affected zone and corrections
- Determine necessary corrections for warp prior to welding.

Outcome #3: Perform SMAW position 3 G and F welds to an apprentice level of welding

- Weld in SMAW 3G and 3F to AWS Code
- Participate in mock destructive testing

Outcome #4: Perform GMAW position 3 G and F welds to an apprentice level of welding

- Weld in GMAW 3G and 3F to AWS Code
- Participate in mock destructive testing

Outcome #5: Create and weld appropriate joints for common manufacturing processes

- Prepare and fit joints using tools typically used in the welding industry to tolerance
- Correctly prepare mock AWS testing plates
- Use basic measuring tools to compare joint fitment to tolerance/allowance

Outcome #6: Identify and precisely use commonly used manufacturing tooling

- Complete basic fabrications using common and basic industry tooling
- Use math to determine necessary angles, lengths and placement of cuts and bends
- Create right angle to tolerance using available manufacturing tooling.

Suggested Texts and Materials

Some Suggested resources:

- AWS Structural Code Book 2020
- Aeorspacewelding.com
- Thefabricator.com
- Aws.org
- Millerwelds.com
- Lincolnelectric.com

Suggested Text:

- Welding Skills 5th Edition; B.J. Moniz

Department Notes

Safety glasses are required at all times in the welding lab, and are provided for students. Students may also purchase their own safety glasses from a local supplier. Long pants and closed toed shoes are required in the welding lab at all times. Appropriate clothing must be worn to work in the lab (no synthetic materials, etc.). Safety requirements are covered prior to work in the lab.

COLUMBIA GORGE
COMMUNITY COLLEGE

The Dalles Campus
400 East Scenic Drive
The Dalles, OR 97058
Click address for directions/map. (https://maps.google.com/?q=400%20East%20Scenic%20Drive%0D%0AThe%20Dalles%2C%20
(541) 506-6000 (tel:5415066000)

Hood River Center
1730 College Way
Hood River, OR 97031-7502
Click address for directions/map. (https://maps.google.com/?

Fabrication Processes 1

Course Number: MFG 151

Transcript Title: Fabrication Processes 1

Created: Aug 11, 2022

Updated: Jul 12, 2023

Total Credits: 3

Lecture Hours: 0

Lecture / Lab Hours: 60

Lab Hours: 0

Satisfies Cultural Literacy requirement: No

Satisfies General Education requirement: No

Grading Options A-F, P/NP, Audit

Default Grading Options A-F

Repeats available for credit: 0

Prerequisites

MFG 150 (/courses/mfg-150)

Course Description

Builds on fabrication principles started in MFG 150 and adds Pos 4 welding on mild steel in groove and fillet fitments. Focuses on scientific principles that effect weld outcomes and how those principles can be used by welders to ensure quality weld and fabrication outcomes. Teaches use of Oxy-Fuel cutting equipment. Prerequisites: MFG 150. Audit available.

Course Outcomes

Upon successful completion of this course, students will be able to:

1. Create Position 4 Fillet weldments using SMAW and GMAW processes for destructive testing as per AWS D1.1 code.
2. Create Position 4 Groove weldments using SMAW and GMAW processes for destructive testing as per AWS D1.1 code.
3. Accurately account for welding warp in mild steel processes.
4. Demonstrate knowledge of heat affected zone chemistry and its practical considerations in welding.
5. Use Oxygen-Fuel cutting techniques to process and handle materials in a fabrication environment.

6. Apply the technicalskills and math needed to carry out correct joint preparation and fit-up.

Suggested Outcome Assessment Strategies

Outcomes are assessed through a mixture of hands on and written assessments. Priority is given to hands-on proficiency based assessment in an environment that rewards demonstration of skill needed for success in industry.

- Lecture and in booth coaching and direct instruction.
- Direct instruction in full class demonstration of skills.
- Written exams.
- Student proficiency through demonstration of learned strategies and skills in industry standard environment.
- Mock AWS Testing procedure (destructive testing) or mock local industry supported on-site testing procedures.
- Job readiness based on performance.
- In class lab experiments and testing using the scientific process with written result reporting.

Course Activities and Design

The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped

classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Course Content

Outcome #1: Create Position 4 Fillet weldments using SMAW and GMAW processes for destructive testing as per AWS D1.1 code.

- Understand American Welding Society (AWS) D1.1 structural code for SMAW 7018 fillet weld process in position 4.
- Prepare plate for welding according to structural standard.
- Weld plate to code specification.
- Prepare plate for destructive testing per AWS Code.
- Interpret destructive testing results.

Outcome #2: Create Position 4 Groove weldments using SMAW and GMAW processes for destructive testing as per AWS D1.1 code.

- Understand American Welding Society (AWS) D1.1 structural code for SMAW 7018 groove weld process in position 4.
- Prepare plate for welding according to structural.
- Weld plate to code specification.
- Prepare plate for destructive testing per AWS Code.

- Interpret destructive testing results.

Outcome #3: Accurately account for welding warp in mild steel processes.

- Define and predict using a formula the amount of warp an assembly will experience based on the expected heat input.
- Create basic tacked together assemblies with warp tolerances pre-accounted for.
- Manufacture and finish assemblies and use quality control best practices to ensure tolerances are met post welding.

Outcome #4: Demonstrate knowledge of heat affected zone chemistry and its practical considerations in welding and fabrication.

- Understand the chemical changes that occur within the heat effected zone and the resulting change in material structure.
- Define the different zones within the heat affected zone and how they are chemically and physically different from the welded zone and base material.
- Understand mitigation strategies for reducing heat affected zone size and fatigue in mild steel.
- Prepare and implement heat affected zone mitigation strategies.

Outcome #5: Use Oxygen-Fuel cutting techniques to process and handle materials in a fabrication environment.

- Understand Oxygen-Fuel cylinder safety and handling procedures.
- Demonstrate proper Oxy-Fuel cutting torch setup and shut down.

- Produce industry standard cuts in material up to 1” thick using appropriate cutting torch size and setup.
- Determine gas flow necessary for appropriate cutting torch operation.
- Understand practical and procedural differences in different types of fuel gasses commonly used in torch cutting.
- Demonstrate basic torch maintenance and upkeep procedures.

Outcome #6: Apply the technical skills and math needed to carry out correct joint preparation and fitup.

- Use circumference math and tube sizing formula to calculate the amount of tube needed to make bent product.
- Calculate angles of triangles and length of triangles in assemblies to accurately determine length of materials needed for projects.
- Accurately calculate material amount needed for large scale project from blueprints and cost material using online resources.

Suggested Texts and Materials

Resources are available openly on the web, but largely the curriculum adaptation needs to be done based on the instructors existing skill set. Since there are many ways to teach the content, the “teach what you know, and teach well what you do” is very appropriate for courses like this.

The following books are recommended:

- Welding Skills, 5th Edition, B.J. Moniz

- Welding Skills Workbook, 5th Edition, Jonathan F. Gosse
- Print Reading for Welders, 5th Edition, Thomas E. Proctor, Jonathan F. Goss

Some Suggested resources:

- AWS Structural Code Book 2020
- Aeorspacewelding.com
- Thefabricator.com
- Aws.org
- Millerwelds.com
- Lincolnelectric.com

Department Notes

Safety glasses are required at all times in the welding lab and are provided for students. Students may also purchase their own safety glasses from a local supplier. Long pants and closed toed shoes are required in the welding lab at all times. Appropriate clothing must be worn to work in the lab (no synthetic materials, ect.). Safety requirements are covered prior to work in the lab.

COLUMBIA GORGE COMMUNITY COLLEGE

Welding Technology I

Course Number: MFG 195

Transcript Title: Welding Technology I

Created: Aug 11, 2022

Updated: Jul 12, 2023

Total Credits: 3

Lecture Hours: 0

Lecture / Lab Hours: 60

Lab Hours: 0

Satisfies Cultural Literacy requirement: No

Satisfies General Education requirement: No

Grading Options A-F, P/NP, Audit

Default Grading Options A-F

Repeats available for credit: 0

Course Description

Introduces the operation of equipment and tools used in standard welding and manufacturing shops. Identifies procedures, practices and skills used by welders including commonly used welding machines and the equipment used to cut and finish material. Audit available.

Course Outcomes

Upon successful completion of this course, students will be able to:

1. Apply welding industry safety standards
2. Demonstrate industry standard basic and commonly welded joints and positions
3. Perform SMAW Position 1 and 2, G and F (groove and fillet) joints to apprentice level of welding
4. Perform GMAW/MIG Position 1and2,G and F (groove and fillet) joints to apprentice level of welding
5. Identify tools and equipment used in the welding industry and apply their appropriate use
6. Research welding careers and the requirements of the profession

Suggested Outcome Assessment Strategies

Assessment will be based upon written examinations for safety and basic welding practice prior to working in the lab, basic tool quizzes after introduction and use, and weld sample inspection / destructive weld sample testing for all SMAW/GMAW welds. An exploratory career research report will be written for the student to better understand potential careers in the field.

Course Activities and Design

The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Course Content

Outcome #1: Apply welding industry safety standards

- Demonstrate appropriate PPE useage
- Safely use common tools in the welding shop
- Display knowledge of environmental hazards in the welding lab

Outcome #2: Demonstrate industry standard basic and commonly welded joints and positions

- Identify lap, groove, butt, plug, slot, corner, edge and fillet joints
- Create lap, groove, butt, plug, slot, corner, edge and fillet joints

Outcome #3: Perform SMAW Position 1 and 2, G and F (groove and fillet) joints to apprentice level of welding

- Pass a SMAW mock certification in Position 1G and 2G
- Pass a SMAW destructive test in Position 1F and 2F.

Outcome #4: Perform GMAW/MIG Position 1and 2,G and F (groove and fillet) joints to apprentice level of welding

- Pass a GMAW mock certification in Position 1G and 2G
- Pass a GMAW destructive test in Position 1F and 2F.

Outcome #5: Identify tools and equipment used in the welding industry and apply their appropriate use

- Identify different commonly used welding shop tools
- Demonstrate efficient and affective use of commonly used welding shop tools
- Determine the appropriate tooling for a task based upon a problem solving based approach

Outcome #6: Research welding careers and the requirements of the profession

- Consider different career options within welding and manufacturing fields
- Determine which careers may be the best choice for you, and articulate why
- Listen and understand from primary sources what different careers in the manufacturing spectrum entail

Suggested Texts and Materials

Resources are available openly on the web, but largely the curriculum adaptation needs to be done based on the instructors existing skill set. Since there are many ways to teach the content, the “teach what you know, and teach well what you do” is very appropriate for courses like this.

Some Suggested resources:

- AWS Structural Code Book 2020
- Aeorspacewelding.com
- Thefabricator.com
- Aws.org
- Millerwelds.com
- Lincolnelectric.com

The following books are recommended:

- Welding Skills 5th Edition B.J. Moniz
- Welding Skills Workbook 5th Edition Jonathan F. Gosse

Department Notes

Safety glasses are required at all times in the welding lab, and are provided for students. Students may also purchase their own safety glasses from a local supplier. Long pants and closed toed shoes are required in the welding lab at all times. Appropriate clothing must be worn to work in the lab (no synthetic materials, etc.). Safety requirements are covered prior to work in the lab.

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Hood River, OR 97031-7502
Click address for directions/map. (https://maps.google.com/?q=1730%20College%20Way%0D%0AHood%20River%2C%20OR%2097031-7502%0D%0AClick%20address%20for%20directions%2Fmap.)

COLUMBIA GORGE COMMUNITY COLLEGE

Production Manufacturing 1

Course Number: MFG 220

Transcript Title: Production Manufacturing 1

Created: Aug 11, 2022

Updated: Jul 12, 2023

Total Credits: 3

Lecture Hours: 0

Lecture / Lab Hours: 60

Lab Hours: 0

Satisfies Cultural Literacy requirement: No

Satisfies General Education requirement: No

Grading Options A-F, P/NP, Audit

Default Grading Options A-F

Repeats available for credit: 0

Prerequisites

MFG 157 (/courses/mfg-157)

Course Description

Introduces use of whole shop production methods for producing parts and assemblies. Describes the use of math and lean manufacturing principles to streamline production and prototyping in the industrial environment. Prerequisites: MFG 157. Audit available.

Course Outcomes

Upon successful completion of this course, students will be able to:

1. Produce complex products from scratch fully utilizing shop equipment.
2. Understand lean manufacturing principles.
3. Develop labor and cost estimating strategies based on prevailing wage.
4. Explore machining processes for production fabrication.

Suggested Outcome Assessment Strategies

Outcomes are assessed through a mixture of hands on and written assessments. Priority is given to hands-on proficiency-based assessment in an environment that rewards demonstration of skill needed for success in industry.

- Lecture and in-booth coaching and direct instruction.
- Direct instruction in full class demonstration of skills.
- Written exams.
- Student proficiency through demonstration of learned strategies and skills in industry standard environment.
- Mock AWS Testing procedure (destructive testing) or mock local industry supported on-site testing procedures.
- Job readiness based on performance.
- In class lab experiments and testing using the scientific process with written result reporting.

Course Activities and Design

The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects,

service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Course Content

Outcome #1: Produce complex products from scratch utilizing shop equipment.

- Create a blueprint and assembly drawing.
- Produce products to tolerance and test, redesign from blueprint if necessary using CNC and manual equipment.
- Develop process and procedure sheets for blueprints.

Outcome #2: Understand lean manufacturing principles.

- Demonstrate knowledge of several lean manufacturing systems.
- Compare and contrast different lean manufacturing designs and their applicable implementation in an industrial environment.

Outcome #3: Develop labor and cost estimating strategies based on prevailing wage.

- Determine prevailing wage of different aspects of a producing a product.
- Create a labor cost estimate broken down by different techniques used.

- Identify any potential cost savings through efficiency in wage labor.

Outcome #4: Explore machining processes for production fabrication.

- Understand machining tools and processes.
- Identify different toolsets and their usage.
- Explore efficiency comparing manual machining and CNC machining.

Suggested Texts and Materials

Resources are available openly on the web, but largely the curriculum adaptation needs to be done based on the instructors existing skill set. Since there are many ways to teach the content, the “teach what you know, and teach well what you do” is very appropriate for courses like this.

Suggested/recommended text:

- Print Reading for Welders 5th Edition Thomas E. Proctor, Jonathan F. Gosse

Suggested Resources:

- AWS Structural Code Book 2020
- Aeorspacewelding.com
- Thefabricator.com
- Aws.org
- Millerwelds.com
- Lincolnelectric.com

- Amatrol Learning Systems Curriculum

Students utilize on campus computer resources and software, e.g. CAD resources.

Department Notes

Safety glasses are required at all times in the manufacturing lab, and are provided for students. Students may also purchase their own safety glasses from a local supplier. Long pants and closed toed shoes are required in the welding lab at all times. Appropriate clothing must be worn to work in the lab (no synthetic materials, ect.). Safety requirements are covered prior to work in the lab.

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Production Manufacturing 2

Course Number: MFG 221

Transcript Title: Production Manufacturing 2

Created: Aug 11, 2022

Updated: Jul 12, 2023

Total Credits: 3

Lecture Hours: 0

Lecture / Lab Hours: 60

Lab Hours: 0

Satisfies Cultural Literacy requirement: No

Satisfies General Education requirement: No

Grading Options A-F, P/NP, Audit

Default Grading Options A-F

Repeats available for credit: 0

Prerequisites

MFG 220 (/courses/mfg-220)

Course Description

Explores CNC operations processes and their role in creating a product from solid 3d modeling. Utilizes numerous systems of control and manufacturing processes to create streamlined research and development and rapid prototype products for testing. Prerequisite MFG 220. Audit available.

Course Outcomes

Upon successful completion of this course, students will be able to:

1. Understand CNC operation and programming.
2. Demonstrate knowledge of feed speed and circular interpolation.
3. Produce product from existing 3d solid model and tolerance.
4. Create and assemble multi-part assemblies produced from CNC equipment.

Suggested Outcome Assessment Strategies

Outcomes are assessed through a mixture of hands on and written assessments. Priority is given to hands-on proficiency-based assessment in an environment that rewards demonstration of skill needed for success in industry.

- Lecture and in-booth coaching and direct instruction.
- Direct instruction in full class demonstration of skills.
- Written exams.
- Student proficiency through demonstration of learned strategies and skills in industry standard environment.
- Mock AWS Testing procedure (destructive testing) or mock local industry supported on-site testing procedures.
- Job readiness based on performance.
- In class lab experiments and testing using the scientific process with written result reporting.

Course Activities and Design

The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects,

service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Course Content

Outcome #1: Understand CNC Operation and Programming.

- Demonstrate knowledge of G-code and write a basic machining process.
- Understand protocols of different commonly used CNC command programs.
- Understand different types of line code and their usage.

Outcome #2: Demonstrate knowledge of feed speed and circular interpolation.

- Program code that runs safely in the simulator.
- Demonstrate ability to optimize code and feed/run speed.
- Use circular interpolation strategies to minimize machining time.

Outcome #3: Produce product from existing 3d solid model and tolerance.

- Take an existing 3d model and apply tool pathing to it for use in a CNC.
- Ensure pathing runs correctly in simulator.
- Run code and tolerance product outcome.

Outcome #4: Create and assemble multi-part assemblies produced from CNC equipment.

- Create a multi-part assembly using CNC machining processes.
- Fabricate to specification of existing blueprint following CNC machine, to correct tolerances and using assembly drawing.

Outcome #5: Identify different CNC tooling.

- Demonstrate knowledge of different types of CNC tooling.
- Identify the job of different tooling and how to use that tooling efficiently.
- Explore safety requirements of different types of tooling.

Suggested Texts and Materials

Resources are available openly on the web, but largely the curriculum adaptation needs to be done based on the instructors existing skill set. Since there are many ways to teach the content, the “teach what you know, and teach well what you do” is very appropriate for courses like this.

Suggested/recommended text:

- Print Reading for Welders 5th Edition Thomas E. Proctor, Jonathan F. Gosse

Suggested Resources:

- AWS Structural Code Book 2020
- Aeorspacewelding.com

- Thefabricator.com
- Aws.org
- Millerwelds.com
- Lincolnelectric.com
- Amatrol Learning Systems Curriculum

Students utilize on campus computer resources and software, e.g. CAD resources.

Department Notes

Safety glasses are required at all times in the manufacturing lab, and are provided for students. Students may also purchase their own safety glasses from a local supplier. Long pants and closed toed shoes are required in the welding lab at all times. Appropriate clothing must be worn to work in the lab (no synthetic materials, ect.). Safety requirements are covered prior to work in the lab.

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Production Manufacturing 3

Course Number: MFG 222

Transcript Title: Production Manufacturing 3

Created: Aug 11, 2022

Updated: Jul 12, 2023

Total Credits: 3

Lecture Hours: 0

Lecture / Lab Hours: 60

Lab Hours: 0

Satisfies Cultural Literacy requirement: No

Satisfies General Education requirement: No

Grading Options A-F, P/NP, Audit

Default Grading Options A-F

Repeats available for credit: 0

Prerequisites

MFG 221 (/courses/mfg-221)

Course Description

Combines the use of CNC technology and other metalworking and welding techniques to create a simulated production fabrication environment from design to prototype. Utilizes numerous integrated math and technology aspects to accurately produce products. Explores manufacturing problem solving and critical thinking. Prerequisites: MFG 221. Audit available.

Course Outcomes

Upon successful completion of this course, students will be able to:

1. Design a blueprint and assembly drawing of a product that requires a full fabrication solution.
2. Create a prototype from blueprint and do real world testing to check design.
3. Fabricate a product that is production ready.
4. Produce a fixture for production fabrication utilizing lean practices and CNC machining efficiency.
5. Run a production run of a product.

Suggested Outcome Assessment Strategies

Outcomes are assessed through a mixture of hands on and written assessments. Priority is given to hands-on proficiency-based assessment in an environment that rewards demonstration of skill needed for success in industry.

- Lecture and in-booth coaching and direct instruction.
- Direct instruction in full class demonstration of skills.
- Written exams.
- Student proficiency through demonstration of learned strategies and skills in industry standard environment.
- Mock AWS Testing procedure (destructive testing) or mock local industry supported on-site testing procedures.
- Job readiness based on performance.
- In class lab experiments and testing using the scientific process with written result reporting.

Course Activities and Design

The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects,

service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Course Content

Outcome #1: Design a blueprint and assembly drawing of a product that requires a full fabrication solution.

- Create a research and development process to determine a needed product.
- Draw and create the solution using solid 3d modeling.
- Describe the fabrication and assembly process of the product; which must include a full fabrication process involving CNC, welding and other.

Outcome #2: Create a prototype from blueprint and do real world testing to check design.

- From the working model, produce a first production prototype.
- Check the prototype for tolerance and design error.
- Test prototype in real word work, collect any necessary data and make any changes.

Outcome #3: Fabricate a finalized product that is production ready.

- Create an efficient and material minimized fabrication process.
- Check final design adjustments for viability.

- Apply lean manufacturing principles to the fabrication process to utilize labor efficiently.

Outcome #4: Produce a fixture for production fabrication utilizing lean practices and CNC machining efficiency practices.

- Write a process and procedure sheet that utilizes a fixture.
- Create a fixture that speeds fabrication process.
- Utilize a fixture that enhances lean manufacturing principles.

Outcome #5: Run a single production run of a product.

- Produce multiple of the same product utilizing production aids.
- Check a production run for tolerance and similarity.
- Develop a marketing campaign for the product.

Suggested Texts and Materials

Resources are available openly on the web, but largely the curriculum adaptation needs to be done based on the instructors existing skill set. Since there are many ways to teach the content, the “teach what you know, and teach well what you do” is very appropriate for courses like this.

Suggested/recommended text:

- Print Reading for Welders 5th Edition Thomas E. Proctor, Jonathan F. Gosse

Suggested Resources:

- AWS Structural Code Book 2020
- Aeorspacewelding.com
- Thefabricator.com
- Aws.org
- Millerwelds.com
- Lincolnelectric.com
- Amatrol Learning Systems Curriculum

Students utilize on campus computer resources and software, e.g. CAD resources.

Department Notes

Safety glasses are required at all times in the manufacturing lab, and are provided for students. Students may also purchase their own safety glasses from a local supplier. Long pants and closed toed shoes are required in the welding lab at all times. Appropriate clothing must be worn to work in the lab (no synthetic materials, ect.). Safety requirements are covered prior to work in the lab.

Aluminum GTAW/TIG Fabrication Process 1

Course Number: MFG 281

Transcript Title: Aluminum GTAW/TIG Fabrication Process 1

Created: Aug 15, 2022

Updated: Jul 12, 2023

Total Credits: 3

Lecture Hours: 0

Lecture / Lab Hours: 60

Lab Hours: 0

Satisfies Cultural Literacy requirement: No

Satisfies General Education requirement: No

Grading Options A-F, P/NP, Audit

Default Grading Options A-F

Repeats available for credit: 0

Prerequisites

MFG 280 (/courses/mfg-280)

Course Description

Builds on the knowledge of MFG 280 by beginning structural code welding practice and deepening knowledge of GTAW AC processes as they pertain to welding aluminum and alloys. Provides experience creating multipart assemblies as in a production manufacturing environment. Corequisites: MFG 280. Audit available.

Course Outcomes

Upon successful completion of this course, students will be able to:

1. Create Position 2 Fillet weldments using AC GTAW processes suitable for destructive testing as per AWS D1.2 code.
2. Create Position 2 Groove weldments using AC GTAW processes suitable for destructive testing as per AWS D1.2 code.
3. Identify and recognize the oxidation processes of aluminum components as they pertain to weld quality.
4. Identify common GTAW AC weld errors and their corrections.

5. Demonstrate knowledge of procedural changes needed for welding different alloys of aluminum.
6. Create multi-part assemblies from aluminum components with attention to tolerance and appropriate interpretation of a weld process sheet (WPS).

Suggested Outcome Assessment Strategies

Outcomes are assessed through a mixture of hands on and written assessments. Priority is given to hands-on proficiency based assessment in an environment that rewards demonstration of skill needed for success in industry.

1. Lecture and in booth coaching and direct instruction.
2. Direct instruction in full class demonstration of skills.
3. Written exams.
4. Student proficiency through demonstration of learned strategies and skills in industry standard environment.
5. Mock AWS Testing procedure (destructive testing) or mock local industry supported on-site testing procedures.
6. Job readiness based on performance.
7. In class lab experiments and testing using the scientific process with written result reporting.

Course Activities and Design

The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Course Content

Outcome #1: Create Position 2 Fillet weldments using AC GTAW processes suitable for destructive testing as per AWS D1.2 code.

- Understand American Welding Society (AWS) D1.2 structural code for aluminum GTAW fillet weld process in position 2.
- Prepare plate for welding according to structural standard.
- Weld plate to code specification.
- Prepare plate for destructive testing per AWS Code.
- Interpret destructive testing results.

Outcome #2: Create Position 2 Groove weldments using AC GTAW processes suitable for destructive testing as per AWS D1.2 code.

- Understand American Welding Society (AWS) D1.2 structural code for aluminum GTAW groove weld process in position 2.
- Prepare plate for welding according to structural standard.
- Weld plate to code specification.
- Prepare plate for destructive testing per AWS Code.
- Interpret destructive testing results.

Outcome #3: Identify and recognize the oxidation processes of aluminum components as they pertain to weld quality.

- Understand the chemical changes / reactions that happen when aluminum is exposed to oxygen in the air.
- Show understanding of appropriate cleanup and prep procedures based on type and extensiveness of oxidation formation on aluminum.
- Identify mechanical and chemical processes used to both prevent oxidation of different aluminum alloys and to clean up existing oxidation on aluminum surfaces.
- Recreate chemical reactions that cause oxidation, and reverse those oxidation reactions.

Outcome #4: Identify common GTAW AC weld errors and their corrections

- Look at different welds and identify problems in procedure, practice or weldment that have created poor weld quality.
- Find problems in weldment using destructive testing and determine cause.
- Using rubric, grade weld quality of peer's work in position 2 fillet and groove weldments, and recommend corrective actions to improve weld quality.

- Find problems in commercially available welded product and produce a corrective action report as a weld engineer or inspector would.

Outcome #5: Demonstrate knowledge of procedural changes needed for welding different alloys of aluminum.

- Demonstrate knowledge of different frequencies and AC balance to use for welding of 6061 aluminum alloy.
- Demonstrate knowledge of different frequencies and AC balance to use for welding 5052 aluminum alloy.
- Identify oxidation correction changes between 5000 series aluminum alloys and 6000 series aluminum alloys.
- Understand necessary procedural changes to avoid centerline cracking in 5000 series aluminum alloys.
- Identify oxidation correction procedures and pre-weldment treatment procedures for cast aluminum weldments.
- Understand procedural differences and best practices for welding “dirty” cast aluminum.

Outcome #6: Create multi-part assemblies from aluminum components with attention to tolerance and appropriate interpretation of a weld procedure specification (WPS).

- Demonstrate aluminum specific design processes in creation of a fabricated multi-part assembly
- Identify possible problems in the assembly and manufacturing of multi-part assemblies as they pertain to GTAW AC aluminum.

- Create a mock weld procedure specification (WPS) for a multi-part assembly, correctly identifying procedures for removal of oxidation and weldment prep and process preparation.
- Assemble to tolerance an aluminum multi-part assembly.

Suggested Texts and Materials

Resources are available openly on the web, but largely the curriculum adaptation needs to be done based on the instructors existing skill set. Since there are many ways to teach the content, the “teach what you know, and teach well what you do” is very appropriate for courses like this.

The following books are recommended:

- Welding Skills, 5th Edition, B.J. Moniz
- Welding Skills Workbook, 5th Edition, Jonathan F. Gosse

Some Suggested resources:

- AWS Structural Code Book 2020
- Aeorspacewelding.com
- Thefabricator.com
- Aws.org
- Millerwelds.com
- Lincolnelectric.com

Department Notes

Safety glasses are required at all times in the welding lab and are provided for students. Students may also purchase their own safety glasses from a local supplier. Long pants and closed toed shoes are required in the welding lab at all times. Appropriate clothing must be worn to work in the lab (no synthetic materials, ect.). Safety requirements are covered prior to work in the lab.

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Stainless Steel GTAW/TIG Welding

Course Number: MFG 285

Transcript Title: Stainless Steel GTAW/TIG Welding

Created: Aug 15, 2022

Updated: Jul 12, 2023

Total Credits: 3

Lecture Hours: 0

Lecture / Lab Hours: 60

Lab Hours: 0

Satisfies Cultural Literacy requirement: No

Satisfies General Education requirement: No

Grading Options A-F, P/NP, Audit

Default Grading Options A-F

Repeats available for credit: 0

Prerequisites

MFG 150 (/courses/mfg-150)
MFG 195 (/courses/mfg-195)

Course Description

Introduces the use of GTAW/TIG equipment on stainless steel alloys, and the methods and techniques for welding on them. Explores different techniques and special shielding gas requirements for pipe, fillet and butt weldment as well as covering prep of materials, consumables and tungsten. Prerequisites: MFG 150, MFG 195. Audit available.

Course Outcomes

Upon successful completion of this course, students will be able to:

1. Demonstrate understanding of the unique shielding gas and back purging procedures necessary when welding and manufacturing products from stainless steel.
2. Identify stainless steel alloy properties and common use as they pertain to manufacturing.
3. Manufacture DC GTAW stainless steel pipe, fillet and groove weldments.

4. Correctly clean and prep weldments and tungsten for DC GTAW on stainless steel.
5. Demonstrate understanding of DC GTAW machine operation, setup and assembly of torch parts.
6. Manufacture a basic stainless steel pressure vessel.

Suggested Outcome Assessment Strategies

Outcomes are assessed through a mixture of hands on and written assessments. Priority is given to hands-on proficiency based assessment in an environment that rewards demonstration of skill needed for success in industry.

- Lecture and in booth coaching and direct instruction.
- Direct instruction in full class demonstration of skills.
- Written exams.
- Student proficiency through demonstration of learned strategies and skills in industry standard environment.
- Mock AWS Testing procedure (destructive testing) or mock local industry supported on-site testing procedures.
- Job readiness based on performance.

Course Activities and Design

The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.

Course Content

Outcome #1: Demonstrate understanding of the unique shielding gas and back purging procedures necessary when welding and manufacturing products from stainless steel.

- Identify different types of shielding gas and their application in welding processes and what gasses are used in GTAW welding of stainless steel alloys.
- Understand the use and necessity of back purging equipment in GTAW welding of stainless steel alloys.
- Demonstrate GTAW shielding gas techniques to minimize carbon contamination / corrosion / loss of austenitic properties in stainless steel.
- Demonstrate GTAW back purging to prevent “sugaring” oxidation on the back of stainless steel joints and pipe.

Outcome #2: Identify stainless steel alloy properties and common use as they pertain to manufacturing.

- Identify properties of 304 Stainless steel alloy, and it's uses in the manufacturing industry. Know the differences between 304SS from 308 and 316.
- Identify properties of 308 stainless steel alloy, and it's uses in the manufacturing industry. Know the differences between 308SS from 304 and 316.
- Identify properties of 316 stainless steel alloy and it's uses in the manufacturing industry. Know the difference between 316SS from 304 and 316.

Outcome #3: Manufacture DC GTAW stainless steel pipe, fillet and groove weldments.

- Perform pipe, butt, and fillet welds on aluminum of varying thicknesses using GTAW welder in lab.
- Perform 1G and 2G welds including correct prep of materials.
- Knowledge of necessary amperage adjustments to ensure full penetration of welds with a blind back side.

Outcome #4: Correctly clean and prep weldments and tungsten for DC GTAW on stainless steel.

- Clean and prepare materials for welding using chemical cleaning agents appropriate for stainless steel.
- Clean and prepare materials for welding using machine cleaning processes and procedures appropriate for stainless steel.

- Post clean materials using chemical agents or electrochemical process as done in industry applications.
- Know appropriate chemical MSDS and first aid.

Outcome #5: Demonstrate understanding of DC GTAW machine operation, setup and assembly of torch parts.

- Identify the correct tungsten types for use in DC GTAW and Stainless Steel welding.
- Identify the correct gas lens size and flow specific to DC GTAW welding on stainless steel.
- Prepare and assemble torch for DC GTAW welding.
- Identify parts used specifically for DC GTAW Welding.
- Identify correct amperage for different thicknesses and alloys of material.
- Setup DC GTAW equipment for welding stainless steel, including correct pulse settings.

Outcome #6: Manufacture a basic stainless steel pressure vessel.

- Manufacture a basic stainless steel pressure vessel from two different schedules of pipe and test to specification.
- Manufacture a basic stainless steel pressure vessel from plate and test to specification.

Suggested Texts and Materials

Resources are available openly on the web, but largely the curriculum adaptation needs to be done based on the instructors existing skill set. Since there are many ways to teach the content, the “teach what you know, and teach well what you do” is very appropriate for courses like this.

The following books are recommended:

- Welding Skills, 5th Edition, B.J. Moniz
- Welding Skills Workbook, 5th Edition, Jonathan F. Gosse

Some Suggested resources:

- AWS Structural Code Book 2020
- Aeorspacewelding.com
- Thefabricator.com
- Aws.org
- Millerwelds.com
- Lincolnelectric.com

Department Notes

Safety glasses are required at all times in the welding lab and are provided for students. Students may also purchase their own safety glasses from a local supplier. Long pants and closed toed shoes are required in the welding lab at all times.

Appropriate clothing must be worn to work in the lab (no synthetic materials, ect.).

Safety requirements are covered prior to work in the lab.

COLUMBIA GORGE
COMMUNITY COLLEGE

The Dalles Campus

400 East Scenic Drive

The Dalles, OR 97058

Click address for directions/map. (https://maps.google.com/?q=400%20East%20Scenic%20Drive%0D%0AThe%20Dalles%2C%20

(541) 506-6000 (tel:5415066000)

Hood River Center

1730 College Way

Hood River, OR 97031-7502

Click address for directions/map. (https://maps.google.com/?q=1730%20College%20Way%0D%0AHood%20River%2C%20OR%2097031-7502%0D%0AClick%20address%20for%20directions%2Fmap.)

(541) 506-6000 (tel:5415066000)

CC date 10.10.24
CC decision _____
CC vote _____

Columbia Gorge Community College

New Course
Lower Division Collegiate (LDC)

(Double click on check boxes to activate dialog box)

SECTION #1 GENERAL INFORMATION

Department:	Mathematics	Submitter name: phone: email:	Pam Morse 541-308-8218 pmorse@cgcc.edu
Prefix and Course Number:	MTH 140	Credits:	4
Course Title: (75 characters max, including spaces)	Mathematics and Games		
May this course be repeated for credit?	☐ Yes ☒ No	For how many times total?	Contact hours: Lecture: 44 Lec/lab: Lab:
Reason for the new course	This is an elective where anyone who has an interest in games can learn some math. This course was requested by the previous Dean to be created.		

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option** which will automatically be assigned for students who do not make a grade option choice when registering for classes.

	Check all that apply	Default (Choose one)
A-F (letter grade)	☒	☒
Pass/No pass	☒	☐
Audit in consultation with faculty	☒	☐

Is this course equivalent to another? If yes, they must have the same description and outcomes.	☐ Yes ☒ No	Course Number and Title

SECTION #2 REQUISITES: PLACEMENT INTO, PRE, CO AND CONCURRENT

Note: if this course is requesting approval for the Gen Ed list, it will have, as a default, the following standard requisites: Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121. Higher levels of any of these prerequisites, or additional prerequisites can be requested. However, if the department wants to set the WR and/or MTH prerequisites at a lower level, you will need to use the Prerequisite Opt-out form available on the Curriculum website.

☐ Standard requisites – Prerequisite: placement into MTH 65 or MTH 98.
Prerequisite/concurrent: WR 121.

☐ Placement into:		☐ Placement into:		
course prefix & number:	MTH 65 or MTH 98 or equivalent placement	☒ Prerequisite	☐ Corequisite	☐ pre/co
course prefix & number:	WR 115 or equivalent placement	☒ Prerequisite	☐ Corequisite	☐ pre/co
course prefix & number:		☐ Prerequisite	☐ Corequisite	☐ pre/co

SECTION #3 COURSE DESCRIPTION, OUTCOMES, AND CONTENT	
COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.	
Explores the mathematics of games by analyzing strategies, probabilities, and decision trees. Utilizes concepts from game theory, combinatorics, and probability theory to understand optimal moves, equilibrium points, and expected payoffs, enhancing strategic thinking and problem-solving skills. Prerequisites: MTH 65 or MTH 98, WR 115, or equivalent placement. Audit available.	
LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to:
	1. Develop problem-solving skills through the analysis of strategies and decision-making processes.
	2. Apply understanding of probability theory and applications in real-world scenarios
	3. Develop critical thinking abilities by evaluating and optimizing game outcomes.
	4. Develop mathematical reasoning skills by exploring the combinatorial aspects of games
Outcomes assessment strategies:	Written assignments, oral presentations, problem solving exercises, construct decision trees, collaborative projects, game creation, quizzes
COURSE CONTENT, ACTIVITIES AND DESIGN	
Activity & Design: The determination of teaching strategies used in the delivery of outcomes is generally left to the discretion of the instructor. On occasion, a department may decide that the inclusion of a particular strategy will be required (specify in "required activities" box below). For example, a department may determine that a course will be required to incorporate a service learning project into its curriculum delivery. However, for the most part, delivery mechanisms fall under academic freedom and so the individuality and creativity of each instructor. Here are some strategies that you might consider when designing your course: lecture, small group/forum discussion, flipped classroom, dyads, oral presentation, role play, simulation scenarios, group projects, service learning projects, hands-on lab, peer review/workshops, cooperative learning (jigsaw, fishbowl), inquiry based instruction, differentiated instruction (learning centers), graphic organizers, etc.	
Department required course activities (optional):	Play games! Inquiry based instruction.
Course Content – organized by outcomes (list each outcome followed by an outline of the	**Outcome #1: Develop problem-solving skills through the analysis of strategies and decision-making processes.** • Construct and analyze decision trees o Classification

related content):	○ Regression ○ Binary ○ Probability ○ Multi-way • Apply decision-making strategies to practical scenarios in economics, business, and other fields **Outcome #2: Apply understanding of probability theory and applications in real-world scenarios.** • Identify the key concepts of probability theory • Analyze risks • Identify the risk • Assess the risk • Strategize to reduce the risk • Supply and Demand • Gerrymandering • Tactical game **Outcome #3: Develop critical thinking abilities by evaluating and optimizing game outcomes.** • Identify patterns • Assess decisions • Anticipate consequences • Ethical and moral implications of games **Outcome #4: Develop mathematical reasoning skills by exploring the combinatorial aspects of games.** • Calculate the number of possible arrangements of game elements • Calculate probabilities of specific events • Create algorithms to solve specific game scenarios
Suggested Texts & Materials (specify if any texts or materials are required):	Suggested texts for the instructor: • The Mathematics of Games (Dover Books on Mathematics) • Game Theory 101: The complete Textbook by William Spaniel • Thinking Strategically: The Competitive Edge in Business, Politics, and Everyday Life by Avinash K. Dixit and Barry Nalebuff • Game Theory: A Very Short Introduction by Ken Binmore • Game Theory: A Nontechnical Introduction by Morton d. Davis • Math Games with Bad Drawings by Ben Orlin Suggested Games: • The Game of 21/15 (not the card game) • The Tower of Hanoi • Julia Robinson Math Festival Gerrymandering • Dots and Boxes • Fractal Structure • Rival Vines

	• Sim (combination) • Arpeggios (risk and reward) • Battleship
Department Notes: (optional)	This should be a hands-on course where students play games first to try and learn strategy before they learn the theory of it.

SECTION #4 TRANSFERABILITY	
Concern over students taking many courses that do not have a high transfer value has led to increasing attention to the transferability of LDC courses. The state requires us to certify that at least one Oregon university will accept our new LDC course in transfer. To ensure the quality of our transfer programs and to provide students with the best information on how individual courses will transfer, we require faculty to ascertain the transferability of a proposed course by communicating with colleagues at a minimum of three Oregon universities, asking the following questions. 1. Is there an equivalent lower division course at the university? 2. Will a department accept the course for its major or minor requirements? 3. Will the course be accepted as part of the University's distribution requirements? While you may contact any Oregon university, we recommend, based on CGCC student transfer history, that you conduct transferability screening with OSU, PSU and EOU as these are the more common destinations of CGCC transfer students. If a course transfers as an elective only, it may still be accepted or approved as an LDC course, depending on the nature of the course.	
Which Oregon universities will the course transfer to? List all	
How does it transfer? Check all that apply	☐ Required or support for major ☐ General education distribution requirement ☒ General elective ☐ Other (provide details)
Provide evidence of transferability from three or more universities. Recommended universities based on CGCC transfer history: OSU, PSU and EOU	☐ Completed Transferability/Articulation of Individual CGCC Courses form ☐ Other - describe
Identify comparables at Oregon community colleges; list college, course prefix, number and title.	There are no comparables at other community colleges.
Are special designations being sought at this time?	☐ General Education – Discipline specific Gen Ed form required. ☐ Cultural Literacy – Cultural Literacy designation request form required. (Cultural Literacy designation requires that the course has a Gen Ed designation.)

SECTION #5 ADDITIONAL INFORMATION FOR NEW LDC COURSES		
Is this course in a degree or certificate as required, an elective or a prerequisite? Please provide details.		
Name of certificate(s):		# credits:
Name of degree(s):	AAOT, AS, AGS	# credits: 90

Briefly explain how this course fits into the above program(s), i.e. requirement or elective:	elective
Impact on other Programs and Departments	
Are there similar courses existing in other programs or disciplines at CGCC? If yes, explain and/or describe the nature of acknowledgements and/or agreements that have been reached.	No other math course is like this.
Have you consulted with the Department Chair(s) of other program(s) regarding potential impact such as content overlap, duplication, prerequisites, enrollment impact etc. Explain and/or describe the nature of acknowledgements or agreements reached.	I have heard from the other departments and they do not feel that there is *any* overlap with their content.
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes – date: April 16, 2024 ☐ No
Implementation term:	☐ Start of next academic year (summer term) ☐ Specify term (if BEFORE start of next academic year):
Allow 1-2 months to complete the new course approval process before the course can be scheduled. The Curriculum Office will notify the submitter, department chair, and department director when the course has completed the approval process and is available to be scheduled. Curriculum changes generally go into effect at the beginning of the next academic year (summer term). Mid-year revisions/additions are discouraged but accommodated when possible if there is a specific, identifiable need.	

SECTION #6 DEPARTMENT REVIEW

"I vouch that this submission has been reviewed by the affiliated department chair and department dean/director and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean/director."

Submitter	Email	Date
Pam Morse	pmorse@cgcc.edu	5/1/24
Department Chair (enter name of department chair): Pam Morse		
Department Dean/Director (enter name of department dean/director):		

NEXT STEPS:

Transfer/Articulation of Individual CGCC Courses

Directions:
Complete this form with all applicable information and as much detail as possible. Include any communication (letters, email strings, phone transcripts) you've had with faculty/staff at the Oregon universities. When you have finished, e-mail this as an attachment to the Curriculum Office at: curriculum@cgcc.edu or slewis@cgcc.edu.

Lower Division Credit (LDC) and General Education Designated Courses must be able to show that at least three Oregon universities will accept the course in transfer. While it is not mandatory, we highly recommend that the three universities that you contact are Portland State University (PSU), Oregon State University (OSU), and Eastern Oregon University (EOU) as these are the most common transfer destinations of CGCC students.

Course #: MTH140 Title: The Mathematics of Games

Credits: 4 Total Contact Hours: Lec: 33 Lab: _____ Lec-Lab: _____

Course Description:
Explores the mathematics of games by analyzing strategies, probabilities, and decision trees. Utilizes concepts from game theory, combinatorics, and probability theory to understand optimal moves, equilibrium points, and expected payoffs, enhancing strategic thinking and problem-solving skills.

Course Prerequisites:
MTH 65 or MTH 98, WR 115, or equivalent placement. Audit available

This course will be accepted in transfer as counting towards:(please check all that apply, identify receiving university, and provide details)

- ☐ Gen Ed/Distribution req. in: (Arts & Letters, Social Science, Science/Computer Science, Math)_____
- ☐ Requirement in major: (list major)_____
- ☐ Elective for major: (list major)_____
- ☐ Course Equivalency: (list comparable courses; identify univ.)_____
- ☐ Other: _____
- ☒ Elective only

Rationale, college/university departments contacted, etc., in support of requested transfer status (**include contact names and titles, times and dates of conversations/emails, and be specific documenting agreements/understandings; include attachments to verify documentation as needed**):
See attached

Based on my conversations with faculty and/or staff at Oregon universities, I verify that to the best of my knowledge, this course will transfer as noted above.

Signature: _____ Date: 5/22/24

Printed Name: Pam Morse Title: Department Chair

Department: Mathematics E-mail pmorse@cgcc.edu

COLUMBIA GORGE COMMUNITY COLLEGE

Pam Morse <pmorse@cgcc.edu>

New Math Course MTH140

WOU Registrar <registrar@mail.wou.edu> Fri, May 3, 2024 at 8:42 AM
To: General Education Program <gened@mail.wou.edu>, Pam Morse <pmorse@cgcc.edu>
Cc: Mathematics Department <mathematics@wou.edu>, Transfer Credit <transfercredit@mail.wou.edu>

Thank you!

I have added Pam Morse from CGCC to this email thread for they can answer any questions you may have.

Susan
--
Office of the Registrar
Western Oregon University
345 Monmouth Ave N | Monmouth, OR 97361
Phone: 503-838-8327 | Fax: 503-838-9696
wou.edu/registrar | 104 Lieuallen Administration Building

WOUREGISTRAROFFICE

On Fri, May 3, 2024 at 8:20 AM General Education Program <gened@mail.wou.edu> wrote:

> This looks like a course that would be appropriate for Critical Thinking in Gen Ed.
>
> However, if this course were offered at WOU that placement would be partly dependent on what and how many prereqs there might be. That information is not provided. I would also add that we don't currently have any Mathematics courses in any Gen Ed category other than Mathematics.
>
> Whether either of these two points matters depends on if there's an equivalent course at WOU or not. If there is, I don't think we can assign a Gen Ed attribute different from the one that course might have, or assign one if the WOU course doesn't have one.
>
> Shaun
>
> Shaun Huston, Director
> he/him/his
> On Kalapuya land

General Education Program
Western Oregon University
www.wou.edu/gened
On May 2, 2024 at 4:07 PM -0700, WOU Registrar <registrar@mail.wou.edu>, wrote:

> Yikes, sorry all. Here is the forwarded attachment.
> [Quoted text hidden]

COLUMBIA GORGE COMMUNITY COLLEGE

Pam Morse <pmorse@cgcc.edu>

[External] Re: <.FW.>New Course MTH14

RO Articulation <articulation@pdx.edu> Tue, May 21, 2024 at 11:37 AM
To: Pam Morse <pmorse@cgcc.edu>

Hi Pam,

This class will transfer as a MTH LD. MTH LD counts as a Math course for the BA and BS degree requirements. Our Math major doesn't have any room for lower division MTH electives unfortunately.

Thanks,
Suzanne
[Quoted text hidden]

COLUMBIA GORGE COMMUNITY COLLEGE

Pam Morse <pmorse@cgcc.edu>

[External] FW: Re: New Course Math 140

UO Registrar's Office <transfercredits@uoregon.edu> Thu, May 23, 2024 at 9:17 AM
To: pmorse@cgcc.edu

Good morning Pam,

My sincerest apologies for the delayed response. Here is how this course will transfer to the University of Oregon:

Columbia Gorge Community College 041519
MTH 140 = MATH 1AAT Mathematics 100-level elective course

If this course is approved when would CGCC begin offering this course and for how many credits? I wasn't able to determine that from the attachment.

Please let me know if you have any questions.

Sincerely,

Shelly

From: "Hayden Harker" <harker@uoregon.edu>
Sent: Monday, May 20, 2024 10:30:48 AM
To: "UO Transfer Credits" <transfercredits@uoregon.edu>

Hi Shelly,
Based on the document provided we think the course would just be elective math credit, not for the major.
Once we saw some materials for the course, it's possible it would fall under the Science Area of Inquiry. But we'd need more information to determine that outcome.
Best,
Hayden

> On May 2, 2024, at 8:40 AM, UO Registrar's Office <transfercredits@uoregon.edu> wrote:
>
> Good morning Hayden,

We've received this request for evaluation for a new course being offered at Columbia Gorge Community Collee. Could you take a look at this course and give your recommendation for credit? Please let me know when you have a free moment. As always, thank you so much for your time. I sincerely appreciate you. Have a great day!

Sincerely,

Shelly

From: "Pam Morse" <pmorse@cgcc.edu>
Sent: Wednesday, May 1, 2024 5:40:47 PM
To: "UO Transfer Credits" <transfercredits@uoregon.edu>

Hello,

I am contacting you in regards to establishing transfer status for our new course:

- MTH 140 Mathematics of Games

Can you verify for me whether this course will transfer to the University of Oregon as a:

- Gen Ed/Distribution requirement in: Arts & Letters, Social Science, or Science/Math/Computer Science
- Requirement in major
- Elective for major
- Elective only
- Other

I've attached a Course Content and Outcome Guide.

Please let me know if you require any further information to make your determinations. Thank you.

Pam Morse
Chair Math Dept.
Mathematics Instructor
541-308-8218
541-645-0512 (cell/text)
https://cgcc.zoom.us/j/5704017360 (zoom conferencing by appt.)
https://www.cgcc.edu/patricia-pam-morse
"Learning is a treasure that will follow its owner everywhere" - Chinese Proverb
Math isn't just about numbers, it's about any kind of abstract object that has properties we can reason about.

Oregon Community College Association

260 13th Street NE
Salem, OR 97301
503.399.9912
https://www.occa17.com

May 17, 2024

TO: Chief Academic Officers (CAOs)
FROM: Lisa Skari, Oregon Presidents' Council (OPC) Chair
RE: Co-requisite designator

In March 2023, the Transfer Council denied the request by the Systems and Operations subcommittee to include corequisite courses in the common course numbering process. Conversations followed with the Director of the Student Success Center, OPC, and CAOs regarding the need to align course designators for corequisite Math courses. Currently, there is a variety of designators including "x", "l", "a", and "s" (i.e. Math 105a; Math 105x).

In the interest of consistency, consultation with the Higher Education Coordinating Commission's Office of Community Colleges and Workforce Development (CCWD) clarified the designator "q" was not widely used and would be ideal for alignment for corequisite courses.

During their May 16, 2024, meeting, OPC unanimously voted to approve the use of "q" as the universal course designator for Oregon community college corequisite courses. Colleges are encouraged to take appropriate action to align catalogs, course schedules, etc., as soon as possible and no later than the 2025-26 academic year.

Lisa Skari
President, Mt Hood Community College
Chair, Oregon Presidents' Council

CC date 10.10.24
CC decision _____
CC vote _____

Columbia Gorge Community College

Course Revision

(Double click on check boxes to activate dialog box)

What are you seeking to revise? Check all that apply		
☒ Course number	☐ Requisites	☐ Related Instruction
☐ Title	☐ Outcomes	☐ Content
☐ Description	☐ Repeatability	☐ Text / Materials

SECTION #1 GENERAL INFORMATION & REVISIONS			
Department	Mathematics	Submitter name Phone Email	Pam Morse 541-308-8218
Reason for Revision	OPC unanimously voted to approve the use of "q" as the universal course designator for Oregon community college corequisite courses.		
Current prefix and number	MTH 105L	Proposed prefix and number	MTH 105Q
Current Course Title	Corequisite for Math in Society	Proposed Course Title (75 characters max)	No change
Current Repeatability	0	Proposed Repeatability	No change

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Current Description (required whether being revised or not)	Proposed Description
Focuses on the foundational skills, concepts, and communication needed to be successful in MTH 105Z Math in Society. Provides appropriate support in arithmetic skills, algebra skills, technology, and study skills in an interactive setting. Corequisite: MTH 105Z.	No change

REQUISITES: Note: If this course has been approved for the Gen Ed list, it will have, as a default the following requisites: "Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121." If the department wants to set the WR and/or MTH prerequisites at a lower level, you will need to submit the Opt-out of Standard Prerequisites Request form.

Current prerequisites, corequisites and concurrent (if no change, leave blank)			
☐ Standard requisites - Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121.			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

Proposed prerequisites, corequisites and concurrent			
☐ Standard requisites - Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121.			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

*****NOTE: Gen Ed Courses revising outcomes are required to submit a new Gen Ed Request form. A new Cultural Literacy Request form will also be required of any course with a Cultural Literacy designation.*****

Current learning outcomes (required whether being revised or not)	New learning outcomes
Upon successful completion of this course, students will be able to: 1. Solve application problems, and communicate and interpret the results in context. 2. Demonstrate relevant skills to effectively engage with the concepts and skills needed in MTH 105Z. 3. Utilize study habits and learning strategies that promote success in MTH 105Z.	Upon successful completion of this course, students will be able to: No change

Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	(required if revising outcomes) N/A
Suggested Texts & Materials updates (specify if any texts or materials are required):	(update as needed) N/A
Department Required Course Activities (optional)	(update as needed) N/A
Department Notes (optional)	(update as needed) N/A

Is this course used for related instruction?	☐ Yes ☒ No
If yes, then check to see if the hours of student learning should be amended in the related instruction template to reflect the revision. This may require a related instruction curriculum revision.	

SECTION #2 IMPACT ON OTHER DEPARTMENTS	
Are there changes being requested that may impact other departments, such as academic programs that require this course as a prerequisite for courses, degrees, or certificates?	☐ Yes ☒ No
Please provide details, who was contacted and the resolution.	
Implementation term	☒ Start of next academic year (summer term) ☐ Specify term (if BEFORE start of next academic year)
Allow 2-3 months to complete the approval process before scheduling the course.	

SECTION #3 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean/director and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean/director."		
Submitter	Email	Date
Pam Morse	pmorse@cgcc.edu	5/22/24
Department Chair (enter name of department chair): Pam Morse		
Department Dean/Director (enter name of department dean/director): Jarett Gilbert		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the Curriculum Office may review and provide feedback.
3. Submissions will be placed on the next agenda with available time slots, and you will be notified of your submission's estimated time for review. The Curriculum Office will send a signature page to your department chair and department dean/director that may be completed electronically. Signature pages must be received by the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
4. It is not mandatory that you attend the Curriculum Committee meeting in which your submission is scheduled for review; however, it is strongly encouraged that you attend so that you may represent your submission and respond to any committee questions. Unanswered questions may result in a submission being rescheduled for further clarification.

CC date 10.10.24
CC decision _____
CC vote _____

Columbia Gorge Community College

Course Revision

(Double click on check boxes to activate dialog box)

What are you seeking to revise? Check all that apply		
☒ Course number	☐ Requisites	☐ Related Instruction
☐ Title	☐ Outcomes	☐ Content
☐ Description	☐ Repeatability	☐ Text / Materials

SECTION #1 GENERAL INFORMATION & REVISIONS			
Department	Mathematics	Submitter name Phone Email	Pam Morse 541-308-8218
Reason for Revision	OPC unanimously voted to approve the use of "q" as the universal course designator for Oregon community college corequisite courses.		
Current prefix and number	MTH 111L	Proposed prefix and number	MTH 111Q
Current Course Title	Corequisite for Precalculus I: Functions	Proposed Course Title (75 characters max)	No change
Current Repeatability	0	Proposed Repeatability	No change

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Current Description (required whether being revised or not)	Proposed Description
Focuses on the foundational skills, concepts, and communication needed to be successful in MTH 111Z Precalculus I: Functions. Provides appropriate support in algebra, functions, problem solving, graphing, technology, and study skills in an interactive setting. Co-requisite: MTH 111Z.	No change

REQUISITES: Note: If this course has been approved for the Gen Ed list, it will have, as a default the following requisites: "Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121." If the department wants to set the WR and/or MTH prerequisites at a lower level, you will need to submit the Opt-out of Standard Prerequisites Request form.

Current prerequisites, corequisites and concurrent (if no change, leave blank)

☐ Standard requisites - Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121.

☐ Placement into:

prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

Proposed prerequisites, corequisites and concurrent			
☐ Standard requisites - Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121.			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

*****NOTE: Gen Ed Courses revising outcomes are required to submit a new Gen Ed Request form. A new Cultural Literacy Request form will also be required of any course with a Cultural Literacy designation.*****

Current learning outcomes (required whether being revised or not)	New learning outcomes
Upon successful completion of this course, students will be able to: 1. Demonstrate the ability to effectively engage with the concepts and skills needed in MTH 111Z. 2. Communicate and interpret results in context. 3. Utilize study habits and learning strategies that promote success in MTH 111Z.	Upon successful completion of this course, students will be able to: No change

Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	(required if revising outcomes) N/A
Suggested Texts & Materials updates (specify if any texts or materials are required):	(update as needed) N/A
Department Required Course Activities (optional)	(update as needed) N/A
Department Notes (optional)	(update as needed) N/A

Is this course used for related instruction?	☐ Yes ☒ No
If yes, then check to see if the hours of student learning should be amended in the related instruction template to reflect the revision. This may require a related instruction curriculum revision.	

SECTION #2 IMPACT ON OTHER DEPARTMENTS		
Are there changes being requested that may impact other departments, such as academic programs that require this course as a prerequisite for courses, degrees, or certificates?		☐ Yes ☒ No
Please provide details, who was contacted and the resolution.		
Implementation term	☒ Start of next academic year (summer term) ☐ Specify term (if BEFORE start of next academic year)	
Allow 2-3 months to complete the approval process before scheduling the course.		

SECTION #3 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean/director and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean/director."		
Submitter	Email	Date
Pam Morse	pmorse@cgcc.edu	5/22/24
Department Chair (enter name of department chair): Pam Morse		
Department Dean/Director (enter name of department dean/director): Jarett Gilbert		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the Curriculum Office may review and provide feedback.
3. Submissions will be placed on the next agenda with available time slots, and you will be notified of your submission's estimated time for review. The Curriculum Office will send a signature page to your department chair and department dean/director that may be completed electronically. Signature pages must be received by the Curriculum Office the day before the Curriculum Committee meeting for which the submission is scheduled. Submissions without signed signature pages will be postponed.
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CC date 10.10.24
CC decision _____
CC vote _____

Columbia Gorge Community College

Course Revision

(Double click on check boxes to activate dialog box)

What are you seeking to revise? Check all that apply		
☒ Course number	☐ Requisites	☐ Related Instruction
☐ Title	☐ Outcomes	☐ Content
☐ Description	☐ Repeatability	☐ Text / Materials

SECTION #1 GENERAL INFORMATION & REVISIONS			
Department	Mathematics	Submitter name Phone Email	Pam Morse 541-308-8218
Reason for Revision	OPC unanimously voted to approve the use of "q" as the universal course designator for Oregon community college corequisite courses.		
Current prefix and number	STAT 243L	Proposed prefix and number	STAT 243Q
Current Course Title	Corequisite for Elementary Statistics I	Proposed Course Title (75 characters max)	
Current Repeatability	0	Proposed Repeatability	

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Current Description (required whether being revised or not)	Proposed Description
Focuses on the foundational skills, concepts, and communication needed to be successful in STAT 243Z Statistics I. Provides appropriate support in arithmetic skills, algebra skills, technology, and study skills in an interactive setting. Corequisite: STAT 243Z.	No change

REQUISITES: Note: If this course has been approved for the Gen Ed list, it will have, as a default the following requisites: "Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121." If the department wants to set the WR and/or MTH prerequisites at a lower level, you will need to submit the Opt-out of Standard Prerequisites Request form.

Current prerequisites, corequisites and concurrent (if no change, leave blank)			
☐ Standard requisites - Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121.			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

Proposed prerequisites, corequisites and concurrent			
☐ Standard requisites - Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121.			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

*****NOTE: Gen Ed Courses revising outcomes are required to submit a new Gen Ed Request form. A new Cultural Literacy Request form will also be required of any course with a Cultural Literacy designation.*****

Current learning outcomes (required whether being revised or not)	New learning outcomes
Upon successful completion of this course, students will be able to: 1. Demonstrate relevant skills to effectively engage with the concepts and skills needed in STAT 243Z. 2. Utilize study habits and learning strategies that promote success in STAT 243Z. 3. Analyze, communicate, and interpret results in context.	Upon successful completion of this course, students will be able to: No change

Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	(required if revising outcomes) N/A
Suggested Texts & Materials updates (specify if any texts or materials are required):	(update as needed) N/A
Department Required Course Activities (optional)	(update as needed) N/A
Department Notes (optional)	(update as needed) N/A

Is this course used for related instruction?	☐ Yes ☒ No
If yes, then check to see if the hours of student learning should be amended in the related instruction template to reflect the revision. This may require a related instruction curriculum revision.	

SECTION #2 IMPACT ON OTHER DEPARTMENTS	
Are there changes being requested that may impact other departments, such as academic programs that require this course as a prerequisite for courses, degrees, or certificates?	☐ Yes ☒ No
Please provide details, who was contacted and the resolution.	
Implementation term	☒ Start of next academic year (summer term) ☐ Specify term (if BEFORE start of next academic year)
Allow 2-3 months to complete the approval process before scheduling the course.	

SECTION #3 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean/director and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean/director."		
Submitter	Email	Date
Pam Morse	pmorse@cgcc.edu	5/22/24
Department Chair (enter name of department chair): Pam Morse		
Department Dean/Director (enter name of department dean/director): Jarett Gilbert		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the Curriculum Office may review and provide feedback.
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CC date 10.10.24
CC decision _____
CC vote _____

Columbia Gorge Community College

Course Revision

(Double click on check boxes to activate dialog box)

What are you seeking to revise? Check all that apply		
☒ Course number	☐ Requisites	☐ Related Instruction
☒ Title	☒ Outcomes	☐ Content
☒ Description	☐ Repeatability	☐ Text / Materials

SECTION #1 GENERAL INFORMATION & REVISIONS			
Department	Arts, Culture & Communications	Submitter name Phone Email	Leigh Hancock lhancock@cgcc.edu
Reason for Revision	OPC unanimously voted to approve the use of "Q" as the universal course designator for Oregon community college corequisite courses.		
Current prefix and number	IRW 115L	Proposed prefix and number	WR 115Q
Current Course Title	Corequisite for Critical Reading and Writing	Proposed Course Title (75 characters max)	Corequisite for Introduction to Expository Writing
Current Repeatability	0	Proposed Repeatability	No change

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Current Description (required whether being revised or not)	Proposed Description
Focuses on the foundational skills, concepts, and communication needed to be successful in Critical Reading and Writing. Provides appropriate support in writing, reading, and study skills in an interactive setting. Co-requisite: IRW 115 or WR 115.	Focuses on the foundational skills, concepts, and communication needed to be successful in Introduction to Expository Writing. Provides appropriate support in writing, reading, and study skills in an interactive setting. Co-requisite: IRW 115 or WR 115.

REQUISITES: Note: If this course has been approved for the Gen Ed list, it will have, as a default the following requisites: "Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121." If the department wants to set the WR and/or MTH prerequisites at a lower level, you will need to submit the Opt-out of Standard Prerequisites Request form.

Current prerequisites, corequisites and concurrent (if no change, leave blank)

☐ Standard requisites - Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121.			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

Proposed prerequisites, corequisites and concurrent			
☐ Standard requisites - Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121.			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

*****NOTE: Gen Ed Courses revising outcomes are required to submit a new Gen Ed Request form. A new Cultural Literacy Request form will also be required of any course with a Cultural Literacy designation.*****

Current learning outcomes (required whether being revised or not)	New learning outcomes
Upon successful completion of this course, students will be able to: 1. Demonstrate the ability to effectively engage with the concepts and skills needed in IRW 115. 2. Utilize study habits and learning strategies that promote success in IRW 115.	Upon successful completion of this course, students will be able to: 1. Demonstrate the ability to effectively engage with the concepts and skills needed in WR 115. 2. Utilize study habits and learning strategies that promote success in WR 115.

Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	(required if revising outcomes) N/A Revision in outcomes does not affect content as currently written. No change other than the course # in the outcomes themselves.
Suggested Texts & Materials updates (specify if any texts or materials are required):	(update as needed) N/A
Department Required Course Activities (optional)	(update as needed) N/A
Department Notes (optional)	(update as needed) N/A

Is this course used for related instruction?	☐ Yes ☒ No
If yes, then check to see if the hours of student learning should be amended in the related instruction template to reflect the revision. This may require a related instruction curriculum revision.	

SECTION #2 IMPACT ON OTHER DEPARTMENTS	
Are there changes being requested that may impact other departments, such as academic programs that require this course as a prerequisite for courses, degrees, or certificates?	☐ Yes ☒ No
Please provide details, who was contacted and the resolution.	
Implementation term	☒ Start of next academic year (summer term) ☐ Specify term (if BEFORE start of next academic year)
Allow 2-3 months to complete the approval process before scheduling the course.	

SECTION #3 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean/director and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean/director."		
Submitter	Email	Date
Leigh Hancock	lhancock@cgcc.edu	5/22/24
Department Chair (enter name of department chair): Leigh Hancock		
Department Dean/Director (enter name of department dean/director): Jarett Gilbert		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the Curriculum Office may review and provide feedback.
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CC date 10.10.24
CC decision _____
CC vote _____

Columbia Gorge Community College

Course Revision

(Double click on check boxes to activate dialog box)

What are you seeking to revise? Check all that apply		
☒ Course number	☐ Requisites	☐ Related Instruction
☐ Title	☐ Outcomes	☐ Content
☐ Description	☐ Repeatability	☐ Text / Materials

SECTION #1 GENERAL INFORMATION & REVISIONS			
Department	Arts, Culture & Communications	Submitter name Phone Email	Leigh Hancock lhancock@cgcc.edu
Reason for Revision	OPC unanimously voted to approve the use of "Q" as the universal course designator for Oregon community college corequisite courses.		
Current prefix and number	WR 121L	Proposed prefix and number	WR 121Q
Current Course Title	Corequisite for Composition I	Proposed Course Title (75 characters max)	No change
Current Repeatability	0	Proposed Repeatability	No change

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin each sentence of the course description with an active verb. Avoid using the phrases: "This course will …" and/or "Students will …" Include course requisites in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Current Description (required whether being revised or not)	Proposed Description
Focuses on the foundational skills, concepts, and communication needed to be successful in Composition I. Provides appropriate support in writing, critical reading, and study skills in an interactive setting. Co-requisite: WR 121Z.	No change

REQUISITES: Note: If this course has been approved for the Gen Ed list, it will have, as a default the following requisites: "Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121." If the department wants to set the WR and/or MTH prerequisites at a lower level, you will need to submit the Opt-out of Standard Prerequisites Request form.

Current prerequisites, corequisites and concurrent (if no change, leave blank)			
☐ Standard requisites - Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121.			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

Proposed prerequisites, corequisites and concurrent			
☐ Standard requisites - Prerequisite: placement into MTH 65 or MTH 98. Prerequisite/concurrent: WR 121.			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

LEARNING OUTCOMES: Describe what the student will be able to do "out there" (in their life roles as worker, family member, community citizen, global citizen or lifelong learners). Outcomes must be measurable through the application of direct and/or indirect assessment strategies. Three to six outcomes are recommended. Start each outcome with an active verb, completing the sentence starter provided. (See Writing Learning Outcomes on the curriculum website.)

*****NOTE: Gen Ed Courses revising outcomes are required to submit a new Gen Ed Request form. A new Cultural Literacy Request form will also be required of any course with a Cultural Literacy designation.*****

Current learning outcomes (required whether being revised or not)	New learning outcomes
Upon successful completion of this course, students will be able to: 1. Demonstrate the ability to effectively engage with the concepts and skills needed in WR 121Z. 2. Utilize study habits and learning strategies that promote success in WR 121Z.	Upon successful completion of this course, students will be able to: No change

Course Content – organized by outcomes (list each outcome followed by an outline of the related content):	(required if revising outcomes) N/A
Suggested Texts & Materials updates (specify if any texts or materials are required):	(update as needed) N/A
Department Required Course Activities (optional)	(update as needed) N/A
Department Notes (optional)	(update as needed) N/A

Is this course used for related instruction?	☐ Yes ☒ No
If yes, then check to see if the hours of student learning should be amended in the related instruction template to reflect the revision. This may require a related instruction curriculum revision.	

SECTION #2 IMPACT ON OTHER DEPARTMENTS	
Are there changes being requested that may impact other departments, such as academic programs that require this course as a prerequisite for courses, degrees, or certificates?	☐ Yes ☒ No
Please provide details, who was contacted and the resolution.	
Implementation term	☒ Start of next academic year (summer term) ☐ Specify term (if BEFORE start of next academic year)
Allow 2-3 months to complete the approval process before scheduling the course.	

SECTION #3 DEPARTMENT REVIEW		
"I vouch that this submission has been reviewed by the affiliated department chair and department dean/director and that they have given initial authorization for this submission. I am requesting that it be placed on the next Curriculum Committee agenda with available time slots. I understand that I am required to complete and submit, prior to the day my submission is reviewed by the Curriculum Committee, a Course Signature Form signed by the department chair and dean/director."		
Submitter	Email	Date
Leigh Hancock	lhancock@cgcc.edu	5/22/24
Department Chair (enter name of department chair): Leigh Hancock		
Department Dean/Director (enter name of department dean/director): Jarett Gilbert		

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or HST 104). Send completed form electronically to curriculum@cgcc.edu or slewis@cgcc.edu.
2. Refer to the curriculum office website for the Curriculum Committee meeting schedule and submission deadlines. You are encouraged to send submissions prior to the deadline so that the Curriculum Office may review and provide feedback.
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Rule Number/Name:	040.033.000 – Related Instruction
Responsible Department:	Instructional Services
Authority:	Director of Curriculum & Academic Assessment

Overview

Programs of study for which applied or specialized associate degrees are granted, or programs of an academic year or more in length for which certificates are granted, must contain a recognizable body of instruction in program-related areas of 1) communication, 2) computation, and 3) human relations. Additional topics which should be covered as appropriate include safety, industrial safety, and environmental awareness. Instruction in the related instructional areas may be either embedded within the program curriculum or taught in blocks of specialized instruction. Each approach, however, must have clearly identified content that is pertinent to the general program of study. (CCWD Website – Oregon Administrative Rule 589-006-0050)

Applicability

Faculty; Curriculum Committee; Instructional Deans; Director of Curriculum & Academic Assessment; Vice President of Instructional Services; Academic Assessment Coordinator.

Administrative Rule Statement

Related Instruction in Associate of Applied Science (AAS) degrees.

Related Instruction for AAS degrees is fulfilled through the requirement of a minimum of 16 credits of general education coursework with at least one course (3 credits or more) in each of the three areas of the General Education/Discipline Studies list (Arts and Letters; Social Science; and Science, Mathematics, and Computer Science). To earn a General Education designation, courses must address at least three of the college's five Institutional Learning Outcomes (ILOs). ILOs cover the three Related Instruction areas of communication, computation, and human relations.

Related Instruction in certificates of 45 credits or more

Certificates of 45 credits or more are required to include coursework that addresses the three area of Related Instruction. Distribution of Related Instruction is recorded on the Related Instruction Template (see Curriculum Office Forms webpage for blank template).

For certificates of 45 to 60 credits: 240 hours (the equivalent of 8 credits) of Related Instruction with representation in three program-related instructional areas, 1) communication, 2) computation, and 3) human relations. A minimum of 48 hours (20% of the minimum total) of student learning is required in each area; 96 hours are at the department's discretion.

For certificates of 61 to 108 credits: 480 hours (the equivalent of 16 credits) of Related Instruction with representation in three program-related instructional areas, 1) communication, 2) computation, and 3) human relations. A minimum of 96 hours (20% of the minimum total) of student learning are required in each area; 192 hours are at the department's discretion.

Related Instruction Course Options:

The related instruction requirement in certificates may be fulfilled using stand-alone courses, courses in the program containing embedded instruction (both described below), or a combination of the two. However, departments are strongly encouraged to use stand-alone courses whenever possible.

Stand-alone course(s) option: Uses existing credit courses (must be 100 level or above) that address 1) communication, 2) computation, or 3) human relations. Sources for this option are a college-level course (CTE or LDC) in any discipline that provides instruction that would be relevant to the discipline in question and clearly addresses one (and only one) of the three Related Instruction areas. (Courses that address more than one area are considered to have embedded related instruction, as described below). Stand-alone courses used for Related Instruction must be identified and the hours included on the Related Instruction Template (see Curriculum Office Forms page for blank template).

Embedded instruction option: Embedded instruction occurs simultaneously with program content instruction. Embedded instruction content and hours must be reflected in each course's CCOG. More than one of the three areas may be embedded in a single course. Departments may identify embedded instruction hours that apply to their CTE courses only. The Related Instruction embedded in courses is recommended by the department, seeking approval from the Curriculum Committee and the vice president of Instructional Services.

Credit and Contact Hour Requirements for Related Instruction:

In order to facilitate identification and recording, Related Instruction is counted in hours of student learning rather than credits. A credit is considered to represent 30 hours of student learning (instruction supported by study and practice). Student learning includes both

direct instruction and class work such as study or practice. For every hour of lecture, it is expected that students will spend 2 hours in study outside of class time; so a 1-credit lecture class meets for 10 hours (minimum) and includes 20 hours additional learning time outside of class. Over the course of a 10-week term that would be equivalent to 30 hours. The distribution of class vs. out-of-class time is different for the lab and lecture-lab configurations. The conventions used at CGCC are as follows:

1 cr lecture meets 1 hr /wk, plus 2 hrs/wk of study, for at least 10 weeks = 30hours
1 cr lec-lab meets 2 hrs/wk, plus 1 hr/wk of study, for at least 10 weeks = 30 hours
1 cr lab meets 3 hrs/wk, with minimal outside study, for at least 10 weeks = 30 hours

The Related Instruction Template identifies the courses and hours of instruction in the three areas used to meet the requirements described above. This is recommended by the department, seeking approval from the Curriculum Committee and the vice president of Instructional Services.

Assessment of Related Instruction

Assessment of Related Instruction outcomes achievement for AAS degrees is completed via Institutional Learning Outcomes Assessment. Assessment of Related Instruction outcomes achievement for certificates is completed via Degree, Certificate and Program Outcomes Assessment. Certificates of 45 credits or more are required to include program outcomes that address the three areas of Related Instruction.

Instructor Qualifications for Embedded Related Instruction

The department for the CTE program develops specific requirements that pertain to the Related Instruction embedded in their courses, and recommends these for administrative approval. These requirements are published as part of the Instructor Qualifications. The Instructor Approval Form will note that an instructor is qualified to deliver embedded Related Instruction either for all courses or for specific courses. Supporting documentation of the relevant qualifications will be attached to the approval form.

Definitions

1. *CCWD – Community Colleges and Workforce Development*: State agency which monitors and approves instructional programming at community colleges.
2. *Curriculum*: All courses offered and their content; a prescribed set of courses leading to a specific outcome, which may include the completion of a degree, certificate, or program.

3. *Program:* A coherent body of classes preparing students for college level work, a credential, certificate, or degree.

Interpretation of Administrative Rule

Director of Curriculum & Academic Assessment

Cross Reference to Related Administrative Rules

1. 040.005.000 – Instructor Minimum Qualifications
2. 040.009.000 – Curriculum Development and Approval
3. 040.027.000 – Credit Guidelines
4. 040.038.000 – Institutional Learning Outcomes Assessment
5. 040.039.000 – Degree, Certificate and Program Outcomes Assessment

Further Information

Director of Curriculum & Academic Assessment
slewis@cgcc.edu
541-506-6047

Strategic Direction

Strategic Priority: Student Success

Appendix

1. CGCC Operating Procedure 040.033.001 – Related Instruction
2. Oregon Administrative Rule 589-006 – Community College Course Approval
3. CCWD Community College Website
    - Related Instruction definition
    - Instructor Qualifications