

1. Course Title Change

Course Number	Former Title	New Title

2. Course Hours Change

Course Number	Title	Change

3. Course Number Change

Course Number	Title	New Course Number

4. Outlines Reviewed for Approval

Course Number	Title	Implementation
AB-105	Street Rod Construction Techniques	2019/WI
AM-133	Engine Systems	2019/WI
BA-211	Financial Accounting I	2019/WI
CJA-134	Correctional Institutions	2019/WI
COMM-140	Introduction to Intercultural Communication	2019/WI
COMM-218	Interpersonal Communication	2019/WI
FN-110	Personal Nutrition	2019/WI
FN-225	Nutrition	2019/WI
MFG-100	Adventures in Technology	2019/WI
MFG-111	Machine Tool Fundamentals I	2019/WI
MFG-273	Mastercam, Lathe, Mill, Multi-Axis	2019/WI
SM-136	Photolithography	2019/WI
WET-130L	Wastewater Operations III Lab	2019/WI

Clackamas Community College
Online Course/Outline Submission System

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Section #1 General Course Information

Department: Automotive

Submitter

First Name: Fred
Last Name: Davis
Phone: 503-310-1932
Email: fredd@clackamas.edu

Course Prefix and Number: AB - 105

Credits: 3

Contact hours

Lecture (# of hours):
Lec/lab (# of hours): 66
Lab (# of hours):
Total course hours: 66

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Street Rod Construction Techniques

Course Description:

In this course, students will learn panel forming, welding, basic body work and repair of individual projects. Includes shop safety, chemical hazard safety, proper and safe use of tools, basic metal work and finishing, and paint preparation and application.

Type of Course: Career Technical Preparatory

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

No

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

No

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- ✓ Summer
- ✓ Fall
- ✓ Winter
- ✓ Spring
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. demonstrate the principles of shop safety;
2. perform basic body work, which includes panel forming, welding, and finishing;
3. perform paint preparation and application.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Shop orientation
2. Shop safety
3. Tool introduction, including selecting and safety using
 - A. Hand tools
 - B. Power tools
 - C. Grinders
 - D. Jacks and stands
 - E. Hoists
 - F. Welding equipment
 - G. Car Care
4. Basic bodywork
 - A. Metal straightening
 - B. Rust repair panel fabrication
 - C. Patch panel installation
 - D. M.I.G. and T.I.G. welding safety and basics
 - E. Metal finishing
5. Plastic filler
 - A. Product selection
 - B. Proper mixing and application
 - C. Contouring and sanding techniques
6. Surface preparation and priming
 - A. Product selection, abrasives and materials
 - B. Mixing and application
 - C. Block sanding
7. Paint preparation
 - A. Abrasive grit progression
 - B. Surface cleaning
 - C. Masking

- D. Paint booth cleaning and set-up
- E. Material selection, mixing, and application
- 8. Detailing
- A. Finish inspection
- B. Defect removal and remediation
- C. Buffing and polishing
- D. Final clean-up

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

First term to be offered:

Next available term after approval

:

Clackamas Community College
Online Course/Outline Submission System

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Section #1 General Course Information

Department: Automotive Technology: Auto Mechanics

Submitter

First Name: Jay
Last Name: Leuck
Phone: 3052
Email: jayl

Course Prefix and Number: AM - 133

Credits: 7

Contact hours

Lecture (# of hours):
Lec/lab (# of hours): 154
Lab (# of hours):
Total course hours: 154

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Engine Systems

Course Description:

This course is designed to provide students with the entry-level skills necessary to repair automobile engines. Includes general engine diagnosis; cylinder head and valve train diagnosis and repair; engine block assembly diagnosis and repair; and lubrication and cooling systems diagnosis and repair.

Type of Course: Career Technical Preparatory

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): Automotive Technology AAS, Under Hood Technician certificate

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations: MTH-020 or placement in MTH-050, WRD-080 or placement in WRD-090

Requirements:

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- Summer
- Fall
- Winter
- Spring**
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. demonstrate general engine diagnosis including engine removal and re-installation (R&R);
2. demonstrate cylinder head and valve train diagnosis and repair;
3. demonstrate engine block assembly diagnosis and repair;
4. demonstrate lubrication and cooling systems diagnosis and repair.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Gasoline engine operation, parts, and specifications
2. Coolant
3. Cooling system operation and diagnosis
4. Engine oil
5. Lubrication system operation and diagnosis
6. Engine condition diagnosis
7. In-vehicle engine service
8. Engine removal and disassembly
9. Engine cleaning and crack detection
10. Cylinder head and valve guide service
11. Camshafts and valve trains
12. Pistons, rings, and connecting rods
13. Engine blocks
14. Crankshafts, balance shafts and bearings
15. Gaskets and sealants
16. Engine assembly and dyno testing
17. Engine installation and break-in

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|----|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |

5. Supports green services **No**

Percent of course: 0%

First term to be offered:

Next available term after approval
:

Clackamas Community College
Online Course/Outline Submission System

Show changes since last approval in red

Section #1 General Course Information

Department: Business & Computer Science: Business

Submitter

First Name: Joan
Last Name: San-Claire
Phone: 3013
Email: joan.san-claire

Course Prefix and Number: BA - 211

Credits: 4

Contact hours

Lecture (# of hours): 44
Lec/lab (# of hours):
Lab (# of hours):
Total course hours: 44

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Financial Accounting I

Course Description:

Student develops skills in the essential principles of accrual-basis financial accounting for service and merchandising companies. Topics cover the recording and reporting of financial transactions according to generally accepted accounting principles through the complete accounting cycle. Included are managing inventory, reconciling the cash account, internal controls, ratio analysis, ethics, and financial statement reporting. Emphasis is on procedure and process.

Type of Course: Lower Division Collegiate

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): Business AAS & Certificate

Are there prerequisites to this course?

Yes

Pre-reqs: BA-101

Have you consulted with the appropriate chair if the pre-req is in another program?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations: BA-104 and BA-111

Requirements:

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

✓ Summer

✓ Fall

✓ Winter

✓ Spring

Not every term

Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. explain double-entry accounting;
2. analyze financial events and apply accrual-basis procedure to complete the accounting cycle for service and merchandising businesses, to include journal entries, worksheets, adjustments, and trial balances;
3. create financial statements and assess the health and prospects of an organization with ratio analysis;
4. apply inventory costing methods, cash management procedures, and internal controls.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Accounting and the business environment.
2. Recording business transactions.
3. The adjusting process.
4. Completing the accounting cycle.
5. Merchandising operations.
6. Merchandise inventory.
7. Internal controls and cash.

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

Section #2 Course 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 currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to ascertain how the course will transfer by answering these 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?

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, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> EOU (Eastern Oregon University) | <input checked="" type="checkbox"/> PSU (Portland State University) |
| <input checked="" type="checkbox"/> OIT (Oregon Institute of Technology) | <input checked="" type="checkbox"/> SOU (Southern Oregon University) |
| <input checked="" type="checkbox"/> OSU (Oregon State University) | <input type="checkbox"/> UO (University of Oregon) |
| <input type="checkbox"/> OSU-Cascade | <input type="checkbox"/> WOU (Western Oregon University) |

Identify comparable course(s) at OUS school(s)

PSU, OSU, and SOU: BA 211
OIT: ACC 201

How does it transfer? (Check all that apply)

- required or support for major**
- general education or distribution requirement
- general elective**
- other (provide details):

First term to be offered:

Next available term after approval

:

Clackamas Community College
Online Course/Outline Submission System

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Section #1 General Course Information

Department: Education, Human Services & Criminal Justice

Submitter

First Name: Ida
Last Name: Flippo
Phone: 3363
Email: iflipp

Course Prefix and Number: CJA - 134

Credits: 3

Contact hours

Lecture (# of hours): 33
Lec/lab (# of hours):
Lab (# of hours):
Total course hours: 33

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Correctional Institutions

Course Description:

The course analyzes prisons, jails and other correctional institutions. It discusses punishment history and rationale. The course identifies functions of custodial staff and describes institutional procedures: reception, classification, program assignment, and release. It studies prison management systems and examines juvenile facilities.

Type of Course: Lower Division Collegiate

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): Corrections AAS

Are there prerequisites to this course?

Yes

Pre-reqs: CJA-130 with a C or better

Have you consulted with the appropriate chair if the pre-req is in another program?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

No

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- Summer
- Fall
- Winter**
- Spring
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. relate different punishment philosophies to corrections practices;
2. associate facility architecture with institutional history and function;
3. recognize the effects of incarceration upon different categories of offenders;
4. describe intake, programming, classification, and release processes;
5. describe everyday life inside correctional facilities;
6. identify causes of disturbances within facilities.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. History, methods, and philosophy of punishment in corrections
2. Physical characteristics of facilities
3. Administration and personnel of prisons, jails, and detention facilities
4. Inmate classification and programming
5. Inmate characteristics and institutional life
6. Institutional disturbances

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

Section #2 Course 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 currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to ascertain how the course will transfer by answering these 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?

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, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> EOU (Eastern Oregon University) | <input checked="" type="checkbox"/> ✓ PSU (Portland State University) |
| <input type="checkbox"/> OIT (Oregon Institute of Technology) | <input checked="" type="checkbox"/> ✓ SOU (Southern Oregon University) |
| <input type="checkbox"/> OSU (Oregon State University) | <input type="checkbox"/> UO (University of Oregon) |
| <input type="checkbox"/> OSU-Cascade | <input checked="" type="checkbox"/> ✓ WOU (Western Oregon University) |

Identify comparable course(s) at OUS school(s)

How does it transfer? (Check all that apply)

- ✓ required or support for major**
- general education or distribution requirement
- general elective
- other (provide details):

First term to be offered:

Specify term: Winter 2019

Clackamas Community College
Online Course/Outline Submission System

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Section #1 General Course Information

Department: Communication Studies

Submitter

First Name: Kerrie
Last Name: Hughes
Phone: 3155
Email: kerrieh

Course Prefix and Number: COMM - 140

Credits: 4

Contact hours

Lecture (# of hours): 44
Lec/lab (# of hours):
Lab (# of hours):
Total course hours: 44

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Introduction to Intercultural Communication

Course Description:

Intercultural Communication is a course dedicated to exploring the impact cultural differences have on the communication process. Students explore their own cultural behaviors and possible ways to deal with difficult situations when cultural differences cause a problem(s). Emphasis is given to the influence of culture on the interpretation of the communication act and to the communication skills that enhance cross-cultural communication.

Type of Course: Lower Division Collegiate

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

Yes

Check which General Education requirement:

- Writing
- Oral Communication
- ✓ Arts and Letters**
- Science & Computer Science
- Mathematics
- Social Science
- ✓ Cultural Literacy**

Is this course part of an AAS or related certificate of completion?

No

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations: WRD-098 or placement in WR-121

Requirements: Non-native English speakers must have a Student Performance Level of 8 as measured by the BEST Plus. There is not a requirement for native speakers

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

Yes

Area: Human Relations

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- Summer
- Fall
- Winter
- Spring**
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. discuss the basic concepts of intercultural communication and how they apply to personal and work-related life; (C1) (AL2) (SS2) (SP1) (SP2) (SP3)
2. recognize and explain how cultural needs, behaviors, assumptions, values and beliefs influence one's own personal communication; (C1) (AL2) (SP1) (SP2) (SP3)
3. develop skills in being non-judgmental in situations involving cultural differences; (C1) (AL1) (AL2) (SP1) (SP2) (SP3)
4. identify value differences and learn to recognize the dominant values of one's culture; (C1) (AL2) (SP1) (SP2) (SP3) (SS2)
5. explain the effects of stereotyping, prejudice, and hate in cultural situations; (C1) (AL2) (SP1) (SP2) (SP3)
6. recognize an increase in his/her own sensitivity towards and appreciation of cultural differences; (C1) (AL2) (SP1) (SP2) (SP3) (SS2)
7. deal more effectively with problems stemming from intercultural misunderstandings and conflict; (C1) (AL1) (AL2) (SP1) (SP2) (SP3)
8. recognize and analyze the various values that underpin different communication styles across cultures. (C1) (AL2) (SP1) (SP2) (SP3) (SS2)

COURSE OUTLINE MAPPING CHART

Mark outcomes addressed by the course:

- Mark "C" if this course completely addresses the outcome. Students who successfully complete this course are likely to have attained this learning outcome.
- Mark "S" if this course substantially addresses the outcome. More than one course is required for the outcome to be completely addressed. Students who successfully complete all of the required courses are likely to have attained this learning outcome.
- Mark "P" if this course partially addresses the outcome. Students will have been exposed to the outcome as part of the class, but the class is not a primary means for attaining the outcome and assessment for general education purposes may not be necessary.

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

- 1.** Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.
- P** **2.** Locate, evaluate, and ethically utilize information to communicate effectively.
- 3.** Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

- S** **1.** Engage in ethical communication processes that accomplish goals.
- S** **2.** Respond to the needs of diverse audiences and contexts.
- S** **3.** Build and manage relationships.

MA: Mathematics Outcomes:

- 1.** Use appropriate mathematics to solve problems.
- 2.** Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

- S** **1.** Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.
- S** **2.** Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

- P** **1.** Apply analytical skills to social phenomena in order to understand human behavior.
- S** **2.** Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

- 1.** Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.
- 2.** Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.
- 3.** Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

CL: Cultural Literacy Outcome

- C** **1.** Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Outcomes Assessment Strategies:

- | | |
|--|---|
| <input checked="" type="checkbox"/> General Examination | <input checked="" type="checkbox"/> Projects |
| <input type="checkbox"/> Oral Examination | <input checked="" type="checkbox"/> Writing Assignments |
| <input checked="" type="checkbox"/> Presentations | <input type="checkbox"/> Industry Standards |
| <input checked="" type="checkbox"/> Thesis/Research Project | <input checked="" type="checkbox"/> Multiple Choice Test |
| <input checked="" type="checkbox"/> Criteria | <input type="checkbox"/> Portfolios |
| <input checked="" type="checkbox"/> Rubrics | <input type="checkbox"/> Standardized Testing |
| <input checked="" type="checkbox"/> Journal Writing | <input type="checkbox"/> Checklist |
| <input type="checkbox"/> Performances/Simulation | <input type="checkbox"/> Pre-Post Assessment |
| <input type="checkbox"/> Other Assessment Tools: | |

Major Topic Outline:

1. Surface and deep culture.
2. What a culture needs.
3. Stereotypes.
4. Cultural identity – subcultures.
6. Ethnocentrism.
8. Review of culture and barriers to intercultural communication.
9. Communication process and noise.
10. Difference in nonverbal communication across cultures
11. Culture shock.
12. Dominant American values.
13. Hofstede's five dimensions of cultural differences.

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|----|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

Section #2 Course 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 currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to ascertain how the course will transfer by answering these 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?

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, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> EOU (Eastern Oregon University) | <input checked="" type="checkbox"/> PSU (Portland State University) |
| <input checked="" type="checkbox"/> OIT (Oregon Institute of Technology) | <input checked="" type="checkbox"/> SOU (Southern Oregon University) |
| <input checked="" type="checkbox"/> OSU (Oregon State University) | <input checked="" type="checkbox"/> UO (University of Oregon) |
| <input checked="" type="checkbox"/> OSU-Cascade | <input type="checkbox"/> WOU (Western Oregon University) |

Identify comparable course(s) at OUS school(s)

COMM-215 Intro to Intercultural Communication at PSU
SP132T at U of O
COMM-205 Intercultural Comm at OIT

How does it transfer? (Check all that apply)

- required or support for major
- general education or distribution requirement**
- general elective**
- other (provide details):** Identity/Plural Tolerance credits at U of O; Humanities Exploration credits at SOU

Provide evidence of transferability: (minimum one, more preferred)

- Correspondence with receiving institution (mail, fax, email, etc.)
- Other. Please explain.**

Verified transferability information through colleges' websites

First term to be offered:

Specify term: Spring 2014

Clackamas Community College
Online Course/Outline Submission System

Show changes since last approval in red

Section #1 General Course Information

Department: Communication Studies

Submitter

First Name: Kelly
Last Name: Brennan
Phone: 3154
Email: kellyb

Course Prefix and Number: COMM - 218

Credits: 4

Contact hours

Lecture (# of hours): 44
Lec/lab (# of hours):
Lab (# of hours):
Total course hours: 44

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Interpersonal Communication

Course Description:

The interpersonal communication process is examined through lectures, reading, and exercises. Subjects include personal and professional relationships, goal-setting, first impressions, conflict resolution, non-verbal messages, image building, self-concepts and assertiveness.

Type of Course: Lower Division Collegiate

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

Yes

Check which General Education requirement:

- Writing
- Oral Communication
- ✓ Arts and Letters**
- Science & Computer Science
- Mathematics
- Social Science
- ✓ Cultural Literacy**

Is this course part of an AAS or related certificate of completion?

No

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations: WRD-098 or placement in WR-121

Requirements:

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

Yes

Area: Human Relations

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- ✓ **Summer**
- ✓ **Fall**
- ✓ **Winter**
- ✓ **Spring**
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. discuss the following orally as well as in writing;
2. identify the impact of interpersonal communication on self and others; (AL1) (AL2)
3. describe the communication process involved in human interplay; (AL1) (AL2) (CL1)
4. demonstrate and identify the listening process and the skills involved in speech acts; (AL1) (AL2)
5. describe self-perception, self-image, self-concepts and the difference between the three; (AL1) (AL2) (CL1)
6. identify conflict resolution and reduction; (AL2)
7. identify and demonstrate non-verbal versus verbal communication behaviors and patterns within relationships; (AL1) (AL2)
8. describe components of communication climates and breakdowns; (AL1) (AL2)
9. identify and describe the steps in relational development, maintenance, and deterioration; (AL1) (AL2) (CL1)
10. identify compliance-gaining strategies; (AL1) (AL2) (CL1)
11. examine and identify the influences that mediated messages (social media, texting, etc.) have on interpersonal relationships.

COURSE OUTLINE MAPPING CHART

Mark outcomes addressed by the course:

- Mark "C" if this course completely addresses the outcome. Students who successfully complete this course are likely to have attained this learning outcome.
- Mark "S" if this course substantially addresses the outcome. More than one course is required for the outcome to be completely addressed. Students who successfully complete all of the required courses are likely to have attained this learning outcome.
- Mark "P" if this course partially addresses the outcome. Students will have been exposed to the outcome as part of the class, but the class is not a primary means for attaining the outcome and assessment for general education purposes may not be necessary.

As a result of completing the AAOT/ASOT general education requirements, students will be able to:**WR: Writing Outcomes**

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.
2. Locate, evaluate, and ethically utilize information to communicate effectively.
3. Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

1. Engage in ethical communication processes that accomplish goals.
2. Respond to the needs of diverse audiences and contexts.
3. Build and manage relationships.

MA: Mathematics Outcomes:

1. Use appropriate mathematics to solve problems.
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

- S** 1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.
- S** 2. Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

- P** 1. Apply analytical skills to social phenomena in order to understand human behavior.
- P** 2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

CL: Cultural Literacy Outcome

- C** 1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Outcomes Assessment Strategies:

- | | |
|--|---|
| <input checked="" type="checkbox"/> General Examination | <input checked="" type="checkbox"/> Projects |
| <input type="checkbox"/> Oral Examination | <input checked="" type="checkbox"/> Writing Assignments |
| <input checked="" type="checkbox"/> Presentations | <input type="checkbox"/> Industry Standards |
| <input type="checkbox"/> Thesis/Research Project | <input checked="" type="checkbox"/> Multiple Choice Test |
| <input checked="" type="checkbox"/> Criteria | <input type="checkbox"/> Portfolios |
| <input checked="" type="checkbox"/> Rubrics | <input type="checkbox"/> Standardized Testing |
| <input type="checkbox"/> Journal Writing | <input type="checkbox"/> Checklist |
| <input type="checkbox"/> Performances/Simulation | <input type="checkbox"/> Pre-Post Assessment |
| <input type="checkbox"/> Other Assessment Tools: | |

Major Topic Outline:

Communication Process Models
 Listening
 Self-perception
 Semantics
 Conflict resolutions and reduction
 Persuasion and compliance-gaining strategies
 Communication climates and attitude change
 Non-verbal versus verbal communication
 Attraction
 Empathy
 Relational development, maintenance, and breakdowns

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|----|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

Section #2 Course 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 currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to ascertain how the course will transfer by answering these 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?

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, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> EOU (Eastern Oregon University) | <input checked="" type="checkbox"/> PSU (Portland State University) |
| <input checked="" type="checkbox"/> OIT (Oregon Institute of Technology) | <input checked="" type="checkbox"/> SOU (Southern Oregon University) |
| <input checked="" type="checkbox"/> OSU (Oregon State University) | <input checked="" type="checkbox"/> UO (University of Oregon) |
| <input checked="" type="checkbox"/> OSU-Cascade | <input checked="" type="checkbox"/> WOU (Western Oregon University) |

Identify comparable course(s) at OUS school(s)

COMM218 Interpersonal Communication at PSU and OSU
COM112 Interpersonal Comm at WOU
COMM125 Interpersonal Comm at SOU

How does it transfer? (Check all that apply)

- required or support for major**
 general education or distribution requirement
 general elective
 other (provide details):

Provide evidence of transferability: (minimum one, more preferred)

- Correspondence with receiving institution (mail, fax, email, etc.)
 Other. Please explain.

Verified transferability through listings on colleges' websites

First term to be offered:

Next available term after approval

:

Clackamas Community College
Online Course/Outline Submission System

Show changes since last approval in red

Section #1 General Course Information

Department: Nursing

Submitter

First Name: **Catalina**
Last Name: **Vlad**
Phone: **xxxx**
Email: **vladc@clackamas.edu**

Course Prefix and Number: FN - 110

Credits: 3

Contact hours

Lecture (# of hours): 33
Lec/lab (# of hours):
Lab (# of hours):
Total course hours: 33

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Personal Nutrition

Course Description:

This course explores how nutrition affects health and fitness for the individual and the family. Students apply knowledge of nutrition guidelines to analyze personal diet and improve current food preparation and habits. It is a basic nutrition course for students with little or no science background.

Type of Course: Lower Division Collegiate

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

No

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

No

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- ✓ Summer**
- ✓ Fall**
- ✓ Winter**
- ✓ Spring**
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. analyze and assess nutritional intake through the application of nutritional guidelines tools and use of a computerized program;
2. identify and select foods that maximize health and well-being;
3. evaluate credibility of nutrition information for evidence of health fraud;
4. develop consumer skills by utilizing nutrition knowledge such as: learning how to read food labels, ingredients list and understanding label claims;
5. explain the role of the six classes of nutrients in developing a healthy diet;
6. explain the principles of food production, food systems and food safety;
7. summarize the special nutritional needs at each lifecycle stage.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Overview of nutrition, including nutrition information and misinformation
2. Planning a healthy diet
3. Food systems, food safety and food technology
4. Digestion, absorption and transport
5. Carbohydrates
6. Lipids
7. Proteins
8. Energy balance, body composition and weight management
9. Vitamins and minerals
10. Lifecycle nutrition

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

Section #2 Course 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 currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to ascertain how the course will transfer by answering these 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?

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, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> EOU (Eastern Oregon University) | <input type="checkbox"/> PSU (Portland State University) |
| <input type="checkbox"/> OIT (Oregon Institute of Technology) | <input type="checkbox"/> SOU (Southern Oregon University) |
| <input type="checkbox"/> OSU (Oregon State University) | <input type="checkbox"/> UO (University of Oregon) |
| <input type="checkbox"/> OSU-Cascade | <input type="checkbox"/> WOU (Western Oregon University) |

Identify comparable course(s) at OUS school(s)

Course transfers to OHSU

How does it transfer? (Check all that apply)

- required or support for major
- general education or distribution requirement
- general elective
- other (provide details):

First term to be offered:

Next available term after approval

:

Clackamas Community College
Online Course/Outline Submission System

Show changes since last approval in red

Section #1 General Course Information

Department: Nursing

Submitter

First Name: **Catalina**
Last Name: **Vlad**
Phone: **xxxx**
Email: **vladc@clackamas.edu**

Course Prefix and Number: FN - 225

Credits: 4

Contact hours

Lecture (# of hours): 44
Lec/lab (# of hours):
Lab (# of hours):
Total course hours: 44

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Nutrition

Course Description:

This course explores the role of nutrients in the development and maintenance of a healthy body. The course examines the relationship between diet and health. Students apply knowledge of nutritional adequacy through computer-aided diet analysis. It discusses current nutrition recommendations and controversies. The course meets requirements for most nursing programs. A strong background in anatomy and physiology, biology or chemistry is recommended.

Type of Course: Lower Division Collegiate

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

No

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

No

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- ✓ Summer
- ✓ Fall
- ✓ Winter
- ✓ Spring
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. analyze and assess nutritional intake through the application of nutritional guidelines tools and use of a computerized program;
2. critically evaluate credibility of nutrition information found in major media sources;
3. identify characteristics of the six classes of nutrients including chemical structures and classifications;
4. explain the key functions of each class of nutrient as it relates to health and health effects including roles in the body, deficiency and toxicity;
5. describe the digestion, absorption and transportation processes related to each class of nutrient;
6. describe the metabolism of the macronutrients and how bodies obtain energy from the foods that are eaten;
7. summarize the special nutritional needs at each lifecycle stage.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Overview of nutrition, including nutrition information and misinformation
2. Planning a healthy diet
3. Carbohydrates
4. Lipids
5. Proteins
6. Digestion, absorption, transport and metabolism
7. Energy balance, body composition and weight management
8. Vitamins
9. Minerals
10. Lifecycle nutrition

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|----|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

Section #2 Course 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 currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to

ascertain how the course will transfer by answering these 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?

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, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> EOU (Eastern Oregon University) | <input type="checkbox"/> PSU (Portland State University) |
| <input type="checkbox"/> OIT (Oregon Institute of Technology) | <input type="checkbox"/> SOU (Southern Oregon University) |
| <input type="checkbox"/> OSU (Oregon State University) | <input type="checkbox"/> UO (University of Oregon) |
| <input type="checkbox"/> OSU-Cascade | <input type="checkbox"/> WOU (Western Oregon University) |

Identify comparable course(s) at OUS school(s)

transfers to OHSU

How does it transfer? (Check all that apply)

- required or support for major
- general education or distribution requirement
- general elective
- other (provide details):

First term to be offered:

Next available term after approval

:

Clackamas Community College
Online Course/Outline Submission System

Show changes since last approval in red

Section #1 General Course Information

Department: Manufacturing

Submitter

First Name: John
Last Name: Phelps
Phone: 6378
Email: johnp

Course Prefix and Number: MFG - 100

Credits: 2

Contact hours

Lecture (# of hours):
Lec/lab (# of hours): 44
Lab (# of hours):
Total course hours: 44

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Adventures in Technology

Course Description:

This is a survey course designed to give students hands-on experience in electronics, manufacturing, basic welding, renewable energy, and fundamental automotive and auto body repair. Variable Credit: 1-2 credits.

Type of Course: Career Technical Preparatory

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

No

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

No

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- Summer
- Fall
- Winter
- Spring
- ✓ Not every term**
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

No

Will this course appear in the schedule?

No

Student Learning Outcomes:

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

1. choose a technical career path based on interest, aptitude, compensation, working conditions and advancement opportunities;
2. identify educational requirements that are necessary to work in a variety of technical fields;
3. discuss various manufacturing industries and job availabilities in those industries.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Safety in industrial settings
2. Manufacturing
3. Electronics
3. Renewable energy
4. Welding
5. Automotive
6. Industry tours

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

First term to be offered:

Next available term after approval

:

Clackamas Community College
Online Course/Outline Submission System

Show changes since last approval in red

Section #1 General Course Information

Department: Manufacturing

Submitter

First Name: **Bob**
Last Name: **Delgatto**
Phone: **3320**
Email: **delgatto@clackamas.edu**

Course Prefix and Number: MFG - 111

Credits: 9

Contact hours

Lecture (# of hours):
Lec/lab (# of hours): 198
Lab (# of hours):
Total course hours: 198

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Machine Tool Fundamentals I

Course Description:

This course is an introduction to machine tool operation, precision measurement and engineering drawings. It also covers machine tool operations including drill presses, lathes and milling machines. The course includes internal and external threading. Variable Credit: 3-9 credits. May be repeated for up to 9 credits.

Type of Course: Career Technical Preparatory

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

Yes

Up to how many credits can this course be repeated to satisfy a degree requirement? 9

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): Manufacturing Technology AAS, Computer-Aided Manufacturing AAS

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations: MFG-107, MTH-050 & MFG-104

Requirements:

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- ✓ **Summer**
- ✓ **Fall**
- ✓ **Winter**
- ✓ **Spring**
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

3 credits:

1. Identify personal protective safety equipment, and proper safe behavior, including machine specific safety procedures, necessary for safe conduct in the machine shop environment;
2. Calculate proper RPM, and feed rates for Lathes, milling machines, and drill presses for a variety of cutting tools;
3. Measure and document dimensions of machined parts through the proper use and handling of a variety of dimensional inspection instruments;
4. Describe the major components of a milling machine, describe advantages and disadvantages of different cutting tool materials, identify mill tool holders, and identify different cutting tools used on a milling machine;
5. Describe the major components of a lathe, describe advantages and disadvantages of different cutting tool materials, identify lathe tool holders, and identify different lathe tool geometries;
6. Name the different types of work holding devices that could be mounted on the spindle of a lathe.

6 credits:

1. Demonstrate the process for changing RPM and Feed Rate on a gear head lathe;
2. Describe the process for dialing in a 4 jaw chuck;
3. Explain the difference between Pitch and Lead of a thread, and apply mathematical formulas used in the single point cutting of a thread on a lathe;
4. Describe the purpose of, and when to engage the Half-Nut on a lathe;
5. Successfully set up, cut and inspect threads on a lathe;
6. Identify major types of Drilling Machines and the variety of drills, taps and support tooling used on them;
7. Demonstrate safe setup, operation, and proper work holding procedures on a drill press, mill and lathe;
8. Apply properly calculated speed and feed rates for a variety of cutting tools on mills and lathes;
9. Describe basic types of cutting fluid and when they should be used.

9 credits:

1. Describe a variety of saws used in industry and demonstrate safe setup and operating procedures when using the horizontal or vertical band saw;
2. Describe conditions that determine blade selection for a horizontal or vertical band saw;
3. Recognize different blade tooth configuration and geometry;
4. Name advantages and disadvantages of an abrasive saw and when it is best used;
5. Demonstrate the proper set up, implementation, and verification of tapping procedures;
6. Describe the proper cutting of external threads with a threading die;
7. Describe the safe and proper use of a pedestal grinder, and demonstrate through the sharpening of a High Speed Steel tool bits.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. 3 Credit:

- a. Shop safety
- b. Lathe, milling machine and drill press rpm calculations
- c. Milling cutter rpm and feed rate calculations
- d. Inch/millimeter conversions
- e. The correct applications, reading, handling and storage of steel rules
- f. How to read and measure parts with a Vernier, dial or digital caliper
- g. Application and reading outside, inside and depth micrometers
- h. Application of small hole gages, telescoping gages and parallel bars
- i. Manual lathe use and application
- j. Lathe controls and their function
- k. Commonly used tool holders for lathes
- l. Commonly used cutting tool for the lathe
- m. Use of 3 & 4-jaw chucks on the lathe
- n. Collets, face plates and drive plates for the lathe

2. 6 Credit:

- a. Operation of the various lathe controls
- b. Facing and center drilling on the lathe
- c. Sixty-degree thread calculations
- d. The setup and cutting of a sixty-degree external thread
- e. In process inspection or Inspection of a completed sixty-degree external thread
- f. The calculations for the cutting of a sixty-degree internal thread
- g. The setting up and cutting of a sixty-degree internal thread
- h. In process inspection or Inspection of a completed sixty-degree internal thread
- i. The various types of drilling machines used by industry
- j. The various types of drills used by industry
- k. The hand grinding of a twist drill
- l. The correct setup and operation of a drilling machine
- m. The correct application, setup and use of Counterboring, countersinking and spotfacing tools

3. 9 Credit:

- a. The various types of saws used by industry
- b. Safe setup and operation of the horizontal and vertical band saws
- c. Applications and advantages and disadvantages of the abrasive saw
- d. How to prepare to setup and use the vertical band saw
- e. Using the vertical band saw
- f. Taps and tapping applications
- g. Correct tapping methods
- h. Reducing tap breakage and broken tap removal
- i. Types and application of thread cutting dies
- j. Shaft size prior the thread cutting with a die
- k. Applications of pedestal grinders in the machine shop
- l. Pedestal grinder safety

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

First term to be offered:

Next available term after approval

:

Clackamas Community College
Online Course/Outline Submission System

Show changes since last approval in red

Section #1 General Course Information

Department: Manufacturing

Submitter

First Name: Charles
Last Name: Lettenmaier
Phone: 3535
Email: charles.lettenmaier

Course Prefix and Number: MFG - 273

Credits: 4

Contact hours

Lecture (# of hours):
Lec/lab (# of hours): 88
Lab (# of hours):
Total course hours: 88

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Mastercam, Lathe, Mill, Multi-Axis

Course Description:

This course covers the fundamentals of Mastercam lathe and mill/turn tool paths. It also provides demonstrations and exercises on new and current programming techniques for advanced mill/turn machining centers. Additional topics will include multi-axis documentation and set-up sheets.

Type of Course: Career Technical Preparatory

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): MasterCAM certificate

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations: MFG-272 or prior experience

Requirements:

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- Summer
- Fall
- Winter
- Spring**
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. construct 2d and 3d turned part models;
2. create, edit and verify lathe toolpaths for roughing and finishing;
3. build toolpath operations to thread and groove part geometry;
4. use C-axis mill toolpaths in facing and indexing operations;
5. use tool definitions and tool libraries;
6. use mill operations for C-axis face and indexing work;
7. use verify and backplot.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. General information
 - a. Solids
 - b. Machine definitions
 - c. Operations manager
 - d. Tool settings
 - e. Stock set-up
2. Multi axis
 - a. Strategies and setup
3. lathe

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|----|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

First term to be offered:

Next available term after approval
:

Clackamas Community College
Online Course/Outline Submission System

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Section #1 General Course Information

Department: Manufacturing

Submitter

First Name: **Wayne**
Last Name: **Sellevaag**
Phone: **3841**
Email: **waynes**

Course Prefix and Number: SM - 136

Credits: 2

Contact hours

Lecture (# of hours): 22
Lec/lab (# of hours):
Lab (# of hours):
Total course hours: 22

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Photolithography

Course Description:

The course covers the relationship between theoretical and practical aspects of current methods and equipment used in photolithography. It also includes troubleshooting common process and equipment-related problems.

Type of Course: Career Technical Preparatory

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): **Electronics Engineering Technology programs**

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations: SM-150

Requirements:

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- Summer
- Fall
- Winter**
- Spring
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. Discuss photoresist, alignment, sources and exposure, and advanced photolithography;
2. troubleshoot the common equipment used in photolithography;
3. perform a photolithography virtual simulation.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Photoresist
2. Alignment
3. Sources and exposure
4. Advanced photolithography
5. Equipment
6. Stepper-virtual simulation

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|----|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

First term to be offered:

Next available term after approval

:

Clackamas Community College
Online Course/Outline Submission System

Show changes since last approval in red

Section #1 General Course Information

Department: Engineering Science

Submitter

First Name: **Matthew**
Last Name: **LaForce**
Phone: **3148**
Email: **laforce**

Course Prefix and Number: WET - 130L

Credits: 0

Contact hours

Lecture (# of hours):
Lec/lab (# of hours):
Lab (# of hours): 33
Total course hours: 33

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Wastewater Operations III Lab

Course Description:

The course is devoted to comprehension of the wastewater treatment process via weekly exploration of a wastewater treatment plant. We will tour a treatment plant and then go over the treatment process in lecture. We will emphasize emerging wastewater technologies, (nitrification/denitrification), sludge and bio-solids management, volatile solids reduction through the digestion (aerobic and anaerobic) processes, sludge/solids processing, solids handling, and ultimate waste solids disposal. Fundamental principles of emerging wastewater treatment process, solids handling, including disinfection and dechlorination of wastewater will be emphasized.

Type of Course: Career Technical Preparatory

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): **Water and Environmental Technology AAS**

Are there prerequisites to this course?

Yes

Pre-reqs: **WET-110 and WET-120**

Have you consulted with the appropriate chair if the pre-req is in another program?

No

Are there corequisites to this course?

Yes

Co-reqs: WET-130

Are there any requirements or recommendations for students taken this course?

No

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

- Summer
- Fall
- Winter
- Spring**
- Not every term
- Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. explore and investigate emerging wastewater technologies via weekly onsite inspection of a treatment plant;
2. describe the operation and maintenance requirements of the most popular and widely used pieces of modern wastewater treatment and sludge handling equipment;
3. describe the principles involved with the disinfection processes for wastewater using available technologies;
4. formulate questions and probable answers for sludge/solids and disinfection related questions likely to appear on an Accredited Board of Certification exam as administered by the Oregon State Department of Environmental Quality.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Emphasize New Emerging Wastewater Treatment Technologies
2. Bio solids Classification and Management(Residue)Discussion/Solids Handling.
- 3 Aerobic & Anaerobic Digestion.
4. Disinfection via UV or Chlorination and Dechlorination

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

First term to be offered:

Next available term after approval

:
