Curriculum Committee Meeting Agenda

Voting Committee Members

Pam Morse (Chair)	Linnea Jaeger	John Schoppert
Kristen Booth	Doris Jepson (Vice Chair)	Stephen Shwiff
P.K. Hoffman	Zip Krummel	
Katy Jablonski	Emilie Miller	

Non-Voting Committee Members

Susan Lewis (Curriculum)

Dawn Sallee-Justesen (Student Services)

Support Staff

Gail Gilliland (Curriculum)

Guests

Tim Schell, Mary Kramer, Dan Ropek

March 8, 2018 3:30 am – 5:00 pm
The Dalles Campus, room 3.218 (student services conference room)
Hood River Campus, room 1.209 (conference room)

Information items (no voting or discussion required):

1. Course inactivations [1]: MEC 121, MEC 122, PE 182T, WLD 190

Business:

1. Approval of February 15, 2018 minutes [2]
2. Retreat date in April (bring your calendars)

Submissions [2] (times are estimates):

1. Tim Schell (3:35 – 3:50 pm)
    - CHN 101 First Year Chinese (New LDC Course)
        i. CHN 101 Opt Out Request
        ii. CHN 101 Gen Ed Request
    - CHN 102 First Year Chinese (New LDC Course)
        i. CHN 102 Gen Ed Request
    - CHN 103 First Year Chinese (New LDC Course)
        i. CHN 103 Gen Ed Request
2. Mary Kramer (3:50 – 4:20 pm)
    - BA 228 Computer Accounting Applications (Revision: des, req)
    - Basic Computer Skills (New Certificate)
    - BI 121 Introduction to Human Anatomy and Physiology I (Revision: des, req)
    - MTH 105 Math in Society (Revision: des, req)
    - PE 182K Hot Yoga (New LDC Course)
    - NCT 60 Welding Basics (New Non-Credit Course)
    - Welding Basics (New NCTC)
3. Mary Kramer (4:20 – 4:40 pm)
    - MEC 120 Hydraulics (Revision: title, des, out)
    - MEC 124 Mechatronic Systems in Advanced Manufacturing (New CTE Course)
    - CIS 170 Embedded Computing (New CTE Course)
    - Electro-Mechanical Technology AAS (Revision: courses, out, credits)
    - Electro-Mechanical Technology certificate (Revision: courses, out, credits, rel inst)

4. Dan Ropek (4:40 – 5:00 pm)
    - BI 211 Principles of Biology (Gen Ed Request)
    - BI 212 Principles of Biology (Gen Ed Request)
    - BI 213 Principles of Biology (Gen Ed Request)
    - CH 100 Everyday Chemistry with Lab (Gen Ed CLO update)
    - CH 121 General Chemistry I (Gen Ed CLO update)
    - CH 122 General Chemistry II (Gen Ed CLO update)
    - CH 123 General Chemistry III (Gen Ed CLO update)
    - CH 221 General Chemistry I (Gen Ed CLO update)
    - CH 222 General Chemistry II (Gen Ed CLO update)
    - CH 223 General Chemistry III (Gen Ed CLO update)
    - ESR 171 Environmental Science: Biological Perspectives (Gen Ed CLO update)
    - ESR 172 Environmental Science: Chemical Perspectives (Gen Ed CLO update)
    - ESR 173 Environmental Science: Geological Perspectives (Gen Ed CLO update)
    - G 201 Geology (Gen Ed CLO update)
    - G 202 Physical Geology (Gen Ed CLO update)
    - G 203 Historical Geology (Gen Ed CLO update)
    - G 207 Geology of the Pacific Northwest (Gen Ed CLO update)
    - G 208 Volcanoes and Their Activity (Gen Ed CLO update)
    - GS 106 Physical Science (Geology) (Gen Ed CLO update)
    - GS 107 Physical Science (Astronomy) (Gen Ed CLO update)
    - GS 108 Physical Science (Oceanography) (Gen Ed CLO update)
    - GS 109 Physical Science (Meteorology) (Gen Ed CLO update)
5. Susan Lewis (if time available)
    - ART 280 Painting (Revision: title, des, out)
        i. ART 280 Gen Ed Request

<u>Discussion Items</u>:

1. none

Next Meeting: April, 2018 (TBD)

Attachments: [1]4 Course inactivations; [2]February 15, 2018 minutes; [2]Submissions: 4 New LDC courses; 2 New CTE courses; 1 New Non-Credit course; 5 course revisions; 1 Opt-Out Request; 7 Gen Ed Requests; 19 Gen Ed CLO updates; 1 New Certificate; 1 New Non-Credit Training Certificate; 1 certificate revision; 1 degree revision.

Columbia Gorge Community College

Course Inactivation

(Double click on check boxes to activate dialog box)

Section #1 General Information			
Course prefix and number	MEC 121	Course title	Mechanical Power 1
Department	CTE	Submitter name: phone: email:	Mary Kramer 541-506-6033 mkramer@cgcc.edu
Reason for Inactivation	MEC 121 and MEC 122 are being combined into and replaced by a single 5 credit course – MEC 123 Industrial Mechanical Systems.		

Section #2 Impact on other departments	
Does this inactivation have an impact on others	
☐ Yes ☒ No If yes, provide details	
Have you consulted with Department Chairs from other disciplines who may be using this course as part of a degree/certificate?	
☐ Yes ☒ No If yes, provide details	
Implementation term	☒ Next available term after approval ☐ Specific term

Section #3 Approval		
The Department Chair and Department Director endorse this inactivation.		
Department Chair	Approved	Date
Stephen Shwiff	☒ Yes ☐ No	3.08.18
Department Director	Approved	Date
Mary Kramer	☒ Yes ☐ No	3.08.18

Next steps:
1. Submit electronically to curriculum@cgcc.cc.or.us.
2. Print a hard copy and obtain signatures in Section #3 from Department Chair and Director.
3. Deliver to Curriculum Office – Susan Lewis or Gail Gilliland.

Course Inactivations are not required to obtain Curriculum Committee approval. Inactivations will be placed on the CC agenda as information items only.

Columbia Gorge Community College

Course Inactivation

(Double click on check boxes to activate dialog box)

Section #1 General Information			
Course prefix and number	MEC 122	Course title	Mechanical Power 2
Department	CTE	Submitter name: phone: email:	Mary Kramer 541-506-6033 mkramer@cgcc.edu
Reason for Inactivation	MEC 121 and MEC 122 are being combined into and replaced by a single 5 credit course – MEC 123 Industrial Mechanical Systems.		

Section #2 Impact on other departments	
Does this inactivation have an impact on others	
☐ Yes ☒ No If yes, provide details	
Have you consulted with Department Chairs from other disciplines who may be using this course as part of a degree/certificate?	
☐ Yes ☒ No If yes, provide details	
Implementation term	☒ Next available term after approval ☐ Specific term

Section #3 Approval		
The Department Chair and Department Director endorse this inactivation.		
Department Chair	Approved	Date
Stephen Shwiff	☒ Yes ☐ No	3.08.18
Department Director	Approved	Date
Mary Kramer	☒ Yes ☐ No	3.08.18

Next steps:
1. Submit electronically to curriculum@cgcc.cc.or.us.
2. Print a hard copy and obtain signatures in Section #3 from Department Chair and Director.
3. Deliver to Curriculum Office – Susan Lewis or Gail Gilliland.

Course Inactivations are not required to obtain Curriculum Committee approval. Inactivations will be placed on the CC agenda as information items only.

Columbia Gorge Community College

Course Inactivation

(Double click on check boxes to activate dialog box)

Section #1 General Information			
Course prefix and number	PE 182T	Course title	Mindful Yoga
Department	Science	Submitter name: phone: email:	Mary Kramer 541-506-6033 mkramer@cgcc.edu
Reason for Inactivation	Being replaced by "Hot Yoga."		

Section #2 Impact on other departments	
Does this inactivation have an impact on others	
☐ Yes ☒ No If yes, provide details	
Have you consulted with Department Chairs from other disciplines who may be using this course as part of a degree/certificate?	
☐ Yes ☒ No If yes, provide details	
Implementation term	☒ Next available term after approval ☐ Specific term

Section #3 Approval		
The Department Chair and Department Director endorse this inactivation.		
Department Chair	Approved	Date
Dan Ropek	☒ Yes ☐ No	3.08.18
Department Director	Approved	Date
Mary Kramer	☒ Yes ☐ No	3.08.18

Next steps:
1. Submit electronically to curriculum@cgcc.cc.or.us.
2. Print a hard copy and obtain signatures in Section #3 from Department Chair and Director.
3. Deliver to Curriculum Office – Susan Lewis or Gail Gilliland.

Course Inactivations are not required to obtain Curriculum Committee approval. Inactivations will be placed on the CC agenda as information items only.

Columbia Gorge Community College

Course Inactivation

(Double click on check boxes to activate dialog box)

Section #1 General Information			
Course prefix and number	WLD 190	Course title	Basic Welding
Department	CTE	Submitter name: phone: email:	Mary Kramer 541-506-6033 mkramer@cgcc.edu
Reason for Inactivation	WLD 190 is not currently attached to a degree or certificate as required for all CTE courses. The Manufacturing certificate includes WLD 195 instead. In the future, WLD 190 will be offered as a non-credit course through community education.		

Section #2 Impact on other departments	
Does this inactivation have an impact on others	
☐ Yes ☒ No If yes, provide details	
Have you consulted with Department Chairs from other disciplines who may be using this course as part of a degree/certificate?	
☐ Yes ☒ No If yes, provide details	
Implementation term	☒ Next available term after approval ☐ Specific term

Section #3 Approval		
The Department Chair and Department Director endorse this inactivation.		
Department Chair	Approved	Date
Stephen Shwiff	☒ Yes ☐ No	3.08.18
Department Director	Approved	Date
Mary Kramer	☒ Yes ☐ No	3.08.18

Next steps:
1. Submit electronically to curriculum@cgcc.cc.or.us.
2. Print a hard copy and obtain signatures in Section #3 from Department Chair and Director.
3. Deliver to Curriculum Office – Susan Lewis or Gail Gilliland.

Course Inactivations are not required to obtain Curriculum Committee approval. Inactivations will be placed on the CC agenda as information items only.

Curriculum Committee Minutes
February 15, 2018
3:30pm – 5:00pm
Location: TDC Room 3.218 (SS Conference Room) and Hood River Room 1.209 (conference room)

PRESENT

Voting Committee Members

Pam Morse (Chair)
Kristen Booth
P.K. Hoffman
Katy Jablonski (phone)
Linnea Jaeger
Zip Krummel
Emilie Miller
Stephen Shwiff

Non-Voting Committee Members

Susan Lewis (Curriculum)
Monica Pope (Student Services – filling in for Dawn)

Support Staff

Gail Gilliland (Curriculum)

Guests

ABSENT

Voting Committee Members

Doris Jepson (Vice Chair)
John Schoppert

Non-Voting Committee Members

Dawn Sallee-Justesen (Student Services)

Item	Discussion	Action
Call to Order	Meeting called to order by Pam at 3:35pm	
Informational item: none		
Business	**Motion: approve February 1, 2018 minutes as written**	Motion: Linnea 2nd: Katy Action: 6 in favor – 0 opposed – 0 abstentions
Submissions		

BI 101 Biology (Gen Ed CLO update)	Science submissions are being brought through Curriculum Committee for the Gen Ed CLO update. Stephen arrives 3:40pm CLO #4 is marked on the left as not addressed, however, outcomes and content is listed in the explanation box. CLO #4 previously was marked as "minimally" addressed, however, the "no changes" box is checked in the information box. These check marks contradict each other. Determined that the CLO was revised and that the "not addressed significantly" was the correct designation. Therefore, the response was "revised" and the entered outcomes and content should be deleted. **Motion: approve as amended.** **CLO #4: mark as "revised" and delete outcomes and content entered in information box.**	Motion: Linnea 2nd Stephen Action: 6 in favor – 0 opposed – 0 abstentions
BI 121 Introduction to Human Anatomy and Physiology I (Gen Ed CLO update)	**Motion: approve as written**	Motion: Stephen 2nd: Katy Action: 6 in favor – 0 opposed – 0 abstentions
BI 122 Introduction to Human Anatomy and Physiology II (Gen Ed CLO update)	**Motion: approve as written**	Motion: Kristen 2nd: Stephen Action: 6 in favor – 0 opposed – 0 abstentions
BI 141 Habitats: Life of the Forest (Gen Ed CLO update)	Brief discussion ensued regarding CLO #3. "Minimally" check-box is marked, however, in the outcomes and content box, the CLO is described as being addressed "in-depth." Committee determined that the CLO is addressed in-depth and amended the check-box. 3:50pm Zip arrives.	Motion: Linnea 2nd: Stephen Action: 7 in favor – 0 opposed – 0 abstentions

	Motion: approve as amended **CLO #3 re-marked as addressed "In-Depth"**	
BI 142 Habitats: Marine Biology (Gen Ed CLO update)	**Motion: approve as written**	Motion: Stephen 2nd: Linnea Action: 7 in favor – 0 opposed – 0 abstentions
BI 143 Habitats: Fresh Water Biology (Gen Ed CLO update)	**Motion: approve as written**	Motion: Katy 2nd: Stephen Action: 7 in favor – 0 opposed – 0 abstentions
BI 231 Human Anatomy and Physiology I (Gen Ed CLO update)	The CC questioned how CLO #3 is addressed as there is no course content listed. Emily represented the Science Department and stated that BI 231-3 include a handful of experiments that would meet the "minimal" designation. **Motion: approve as written**	Motion: Zip 2nd: Stephen Action: 7 in favor – 0 opposed – 0 abstentions
BI 232 Human Anatomy and Physiology II (Gen Ed CLO update)	The outcomes do not address specifically address quantitative reasoning. Therefore, without the inclusion of course content, it is difficult to determine how the CLO is addressed. **Motion: approve as written**	Motion: Stephen 2nd: Emily Action: 7 in favor – 0 opposed – 0 abstentions
BI 233 Human Anatomy and Physiology III (Gen Ed CLO update)	**Motion: approve as written**	Motion: Katy 2nd: Kristen Action: 7 in favor – 0 opposed – 0 abstentions

BI 234 Microbiology (Gen Ed CLO update)	**Motion: approve as written**	Motion: Kristen 2nd: Emily Action: 7 in favor – 0 opposed – 0 abstentions
Discussion Items:		
Definitions of "In-Depth" and "Minimally"	Kristen and P.K. continued the conversation regarding definitions of "Major" and "Minor". The following concepts were discussed resulting in a passed motion to accept the new definitions for "Major" and "Minor": • Inclusion of a requirement in both "major" and "minor" designations for having an "assignment" that can be assessed by applying the appropriate CLO rubric. • There is inconsistency of terminology in the two designations in that "enduring" expresses length of time, while "fundamental" expresses level of knowledge. While there was agreement that "enduring" was a positive concept, in order to align the two designations, "enduring" would be changed to "thorough." **Motion: approve "major" and "minor" definitions/language for addressing CLOs when applying for a Gen Ed designation:** To establish an intentional learning environment, Core Learning Outcomes (CLOs) require a clear definition of instructional strategies, evidence of recurrent instruction, and employment of several assessment modes.	Motion: Zip 2nd: Stephen Action: 7 in favor – 0 opposed – 0 abstentions

	Major Designation: 1. The outcome is addressed recurrently in the curriculum, regularly enough to establish a thorough understanding. 2. Students can demonstrate and are assessed on a thorough understanding of the outcome. • The course includes at least one assignment that can be assessed by applying the appropriate CLO rubric. Minor Designation: 1. The outcome is addressed adequately in the curriculum, establishing fundamental understanding. 2. Students can demonstrate and are assessed on a fundamental understanding of the outcome. • The course includes at least one assignment that can be assessed by applying the appropriate CLO rubric.	
Adjourn: 4:50pm	Stephen moves to adjourn, Susan 2nds	
Next Meeting: March 8, 2018 3:30pm – 5:00pm Location: TDC Room 3.218 (SS Conference Room) and HRC Room 1.209 (Conference Room)		

CC date _____
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:	Writing, Reading, Literature and Foreign Language		Submitter name: phone: email:	Tim Schell 541-506-6171 tschell@cgcc.edu
Prefix and Course Number:	CHN 101		Credits:	5
Course Title: (60 characters max, including spaces)	First Year Chinese		Transcript Title: (30 characters max, including spaces)	First Year Chinese
May this course be repeated for credit?	☐ Yes ☒ No	For how many times total?	Contact hours	Lecture: 50 Lec/lab: 0 Lab: 0
Reason for the new course	To broaden foreign language offerings.			

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: MTH 20 or equivalent placement test scores. 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 RD, 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: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121

☐ Placement into:		☐ Placement into:		
course prefix & number:	RD 115, WR 115	☐ Prerequisite	☐ Corequisite	☒ pre/co
course prefix & number:		☐ Prerequisite	☐ Corequisite	☐ pre/co
course prefix & number:		☐ Prerequisite	☐ Corequisite	☐ pre/co

Section #3 Course Description, Outcomes, and Content	
COURSE DESCRIPTION: Begin the course description with an active verb. Avoid using the phrases: This course will and/or Students will. Include course requisite recommendations in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.	
Emphasizes effective communication skills in both written and spoken Mandarin Chinese. Provides an understanding of practices of native Chinese culture. Helps beginners with language proficiency as well as cultural awareness. The first term in a three-term sequence. Prerequisite/concurrent: RD 115, WR 115. 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), not in the classroom outcomes. Three to six outcomes are recommended. See course outcomes guidelines on the curriculum website.	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Exchange basic greetings and communicate in predictable settings with appropriate vocabulary. 2. Pronounce Chinese phonetic symbols accurately. 3. Employ the understanding of basic Chinese syntactic system to read and compose simple colloquial Chinese texts in Chinese characters. 4. Apply basic cultural understanding and recognize cultural values when interacting with native Chinese speakers.
Outcomes assessment strategies:	1. Active class participation, including individual, pair or group activities. 2. Individual presentations. 3. Contextual written responses to assess reading, writing, cultural and aural competencies. 4. Oral interviews with peers and/or instructor. 5. In-class, interactive student role-plays
COURSE CONTENT, ACTIVITIES AND DESIGN	
Course activities and design (what teaching methods are recommended?):	The course is taught in an immersion style requiring various levels of collaboration, creativity, and critical-thinking skills. The course is designed to help student develop the control of their learning and respect toward different cultures through hands-on activities: 1. One-to-one interviews 2. Group, pair and individual activities 3. Group and individual projects and presentations 4. Class Drills 5. Multi-cultural activities

Course Content: Themes, Concepts, Issues and Skills: (should be connected to the outcomes)	Include all or most of the following: I. Vocabulary a. Greetings and leave taking b. Age, birth month and nationality c. Locations, provinces and towns in China d. Time, weather, telephone numbers and vocabulary of cost of goods and services e. Numbers II. Pronunciation III. Grammar structures a. Verbs b. Interrogatives c. Personal pronouns d. Descriptive adjectives e. Word orders f. Conjunctions IV. Chinese characters: Reading/Writing V. Conversation Themes a. Introductions and leave takings b. Gratitude and apology c. Family d. Time and dates e. Invitations: acceptance and rejection VI. Chinese Culture a. Dining etiquette b. Business etiquette c. Family culture d. Holidays
Department Notes (optional)	

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 currently requires us to certify that at least one OUS school will accept our new LDC course in transfer. We anticipate that the state will soon require evidence of transferability, possibly from more than one school before a new course is approved. It is important that we address these issues as early as possible in the development and internal approval process for new courses. 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 school will the course transfer to? List all	Portland Community College Oregon State University Eastern Oregon University

	University of Oregon Portland State University
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: (minimum one university, more preferred)	☒ Completed Transferability Status form ☒ E-mail correspondence with receiving institution ☐ Other - provide evidence
Identify comparables at Oregon schools	
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 a course is on the Gen Ed list).

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):	Any certificate with General Education Electives	# credits: 5
Name of degree(s):	Any degree with General Education Electives or General Electives	# credits: 5
Briefly explain how this course fits into the above program(s), i.e. requirement or elective:	Arts & Humanities discipline General Education 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.	
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.	No.	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes ☐ No	

Implementation term:	☐ Next available term after approval ☒ Specify term: Summer 2018
Allow 3-4 months to complete the new course approval process before the course can be scheduled. Note: Most LDC courses will implement in fall term depending on the formal approval process. There may be exceptions for LDC disciplines that operate as CTE programs.	

Section # 6 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Tim Schell	tschell@comcast.net	1/29/18
Department Director	Email	Date
n/a		

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.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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 submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Columbia Gorge Community College

Opt-out of Standard Prerequisites Request

Section #1 General Information			
Department:	Writing, Reading, Literature and Foreign Languages	Submitter name: Phone: Email:	Tim Schell (541) 506-6171 tschell@cgcc.edu
Course prefix and number	CHN 101	Credits:	5
Course title	First Year Chinese		
Course description Including prerequisites	Emphasizes effective communication skills in both written and spoken Mandarin Chinese. Provides an understanding of practices of native Chinese culture. Helps beginners with language proficiency as well as cultural awareness. The first term in a three-term sequence. Prerequisite/concurrent: RD 115, WR 115. Audit available.		

Section #2 Discipline Specific Opt-out Description and Reasoning	
Describe the steps the department has taken to investigate the relationship between the Dev Ed levels of reading, writing, and math, and the skills needed to be successful in this course	Because the students will be learning to read and write Chinese characters, there will be little reading and writing of roman characters, and the department chair has deemed that students who have taken or are taking RD 115 and WR 115 as to be sufficiently prepared to succeed in CHN 101. Also, as there will be little to no mathematics in the curriculum, the department chair has also deemed MTH 20 to be unnecessary regarding a student's ability to succeed in the course.

Please complete all questions for each area (Writing, Reading, and Math) relevant to your opt-out request

Writing

The standard writing prerequisite for courses that are on the Gen Ed/discipline studies and/or AAOT Distribution lists will be a **Prerequisite/concurrent: WR 121**. To qualify as a satisfactory prerequisite, a course must be passed with a "C" or better.

Pre-College Writing. Students practice writing well-developed paragraphs and sometimes short essays. They are introduced to campus computer resources and encouraged to word-process. Errors are pervasive and sentence structure is limited.

WR 90. Students practice multi-paragraph essays with main idea and support and variety in sentence structure. Word processing is required. Though grammar is a big focus, errors persist at the end of the term.

WR 115. By the end of WR 115, students should be able to write essays 2-3 pages in length with confidence. Students work further on writing skills by reading critically, responding to texts, and writing for different audiences. They will have been introduced to the use of quotations, paraphrases and documentation.

Prerequisite Requested	Pre-Requisite/Concurrent WR 115

Please explain how students can successfully achieve the intended **learning outcomes, competencies and skills** listed in the CCOG for this course without concurrent enrollment or previous completion of WR 121 with a "C" or better.

Because the students will be learning to read and write Chinese characters, there will be little reading and writing of roman characters, and the department chair has deemed that students who have taken or are taking RD 115 and WR 115 as to be sufficiently prepared to succeed in CHN 101.

What instructional materials and other teaching methods are used in this course?

A Chinese textbook and workbook.

What assessments are used to measure outcomes?

1. Active class participation, including individual, pair or group activities.
2. Individual presentations.
3. Contextual written responses to assess reading, writing, cultural and aural competencies.
4. Oral interviews with peers and/or instructor.
5. In-class, interactive student role-plays

What strategies do you employ to support students whose writing skills are deficient?

As the students will be learning to write in Chinese characters, all students will receive hands-on instruction.

Reading

The standard reading prerequisite for courses that are on the Gen Ed/discipline studies and/or AAOT Distribution lists will be a **"C" or higher grade in RD 115, or college-level reading skills** demonstrated by a Compass reading score of at least 88.

Pre-College Reading. Students are not print–oriented. Though they can read at a very low high school level, many have never read a book. They have limited ability to persist with a text and their comprehension skills are limited, but they often don't realize it.

RD 90. Though students grow more confident with print material, they possess limited general knowledge. Comprehension, analysis, and retention of college-level material are poor. There is some improvement in reading frequency and persistence.

RD 115. Students develop critical reading skills and apply them to excerpts from college-level texts. They need to continue building vocabulary, speed and comprehension. They have become fairly good at monitoring their own skills.

Prerequisite Requested	Prerequisite/Concurrent: RD 115

Please explain how students can successfully achieve the intended **learning outcomes, competencies and skills** listed in the CCOG for this course without Reading 115 skills.

The students will have either taken RD 115 prior to taking CHN 101, or they will be taking it concurrently. If the latter, the student's reading level will be sufficient to succeed in the class as the student will be learning to read and write Chinese characters.

What instructional materials and other teaching methods are used in this course?

A Chinese textbook and workbook.

What **assessments** are used to measure outcomes?

1. Active class participation, including individual, pair or group activities.
2. Individual presentations.
3. Contextual written responses to assess reading, writing, cultural and aural competencies.
4. Oral interviews with peers and/or instructor.
5. In-class, interactive student role-plays

What strategies do you employ to support students whose writing skills are deficient?
As the students will be learning to write in Chinese characters, all students will receive hands-on instruction.

Math	
The standard math prerequisite for courses that are on the Gen Ed/discipline studies and/or AAOT Distribution lists will be a **"C" or higher grade in MTH 20 or placement into MTH 60.** Math 20 teaches students how to use fractions, percents, charts and graphs, introduces concepts of basic statistics, along with other basic math concepts. In the process of learning these concepts, students are developing skills in logical thinking, including the ability to process information in a logical way, and to sort information in a step-by-step manner. Before requesting to opt-out of the Math 20 prerequisite, consider how mastery of these basic skills might be necessary for students to understand, for example, maps, graphs, statistics, and other data in this course. Consider how Math 20 skills could facilitate overall student success in this course.	
Prerequisite Requested	None
Please explain how the students can successfully achieve the intended **learning outcomes, competencies and skills** listed in the CCOG for this course without having obtained Math 20 skills.	
The course content does not include Math.	
What instructional materials and other teaching methods are used in this course?	
A Chinese textbook and workbook.	
What **assessments** are used to measure outcomes?	
1. Active class participation, including individual, pair or group activities. 2. Individual presentations. 3. Contextual written responses to assess reading, writing, cultural and aural competencies. 4. Oral interviews with peers and/or instructor. 5. In-class, interactive student role-plays	
What strategies do you employ to support students whose math skills are deficient?	
Such consideration is unnecessary.	

Section #3 Other Considerations:
Is there any other information you would like the committee to consider regarding this request?
No.

Section # 4 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Tim Schell	tschell@cgcc.edu	2/7/2018
Department Director	Email	Date
n/a		

Transfer/Articulation of Individual CGCC Courses

To be completed by CGCC faculty

Directions:
Complete this form with all applicable information and as much detail as possible. Include any communication you've had with faculty/staff at the OUS schools. When you have finished, e-mail this as an attachment to the Curriculum Office at: curriculum@cgcc.edu

Upon receipt of this form along with the Gen Ed Request form, your request for a general education designation will be included on the next Curriculum Committee agenda. **In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.**

Course #: CHN 101 Title: First Year Chinese

Credits: 5 Total Contact Hours: Lec: 50 Lab: 0 Lec-Lab: 0

Course Description:

Emphasizes effective communication skills in both written and spoken Mandarin Chinese. Provides an understanding of practices of native Chinese culture. Helps beginners with language proficiency as well as cultural awareness. The first term in a three-term sequence. Prerequisite/concurrent: RD 115, WR 115. Audit available.

Course Prerequisites: Prerequisite/concurrent: RD 115, WR 115.

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
- ☐ Requirement in major: (list major)_____
- ☐ Elective for major: (list major)_____
- ☒ Course Equivalency: PCC: CHN 101; EOU: CHN 101; OSU: CHN 111; PSU: CHN 101
- ☐ 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):

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

Signature: _____ Date: 1/31/18

Printed Name: Tim Schell Title: Chair

Department: Writing, Reading, Literature and Foreign Languages E-mail: tschell@cgcc.edu

See other side

Mail

More

Transferability Request: CHN 101, 102, 103 at CGCC --> OSU

Inbox

Inbox (986)
Starred
Sent Mail
Drafts (7)
Junk Mail (381)
RSS Feeds.dup1 (2)
More

Tim +

No recent chats
Start a new one

Dahlem, Judith Ann <judy.dahlem@oregonstate.edu>
to me

Hello, Professor Schell,

We would certainly accept these three courses in transfer. They would be articulat

If you'd be so kind as to let me know when your courses are approved, I'll see that

Best regards,

Judy

Judy Dahlem
Articulation Coordinator
Office of Admissions
Oregon State University
judy.dahlem@oregonstate.edu
541-737-2249

BEAVER NATION

"When will our consciences grow so tender that we will act to prevent human misery rather t

From: Tim Schell [mailto:tschell@cgcc.edu]
Sent: Wednesday, January 24, 2018 3:53 PM
To: Oregon State University Admissions <osuadmit@oregonstate.edu>
Subject: For Judy Dahlem: Transferability Request

Dear Ms. Judy Dahlem,

I am writing you regarding a new course we are preparing to take to our Curriculum C

I have attached the information about each of the three terms of First Year Chinese. I

Thank you very much,

Tim

Tim Schell, MFA, RPCV
Chair, Writing, Reading, Literature and Foreign Language Department
Columbia Gorge Community College
Hood River-Indian Creek Campus
1730 College Way
Hood River, OR 97031-7502
(541) 506-6171 (Direct)

Dahlem, Judith Ann <judy.dahlem@oregonstate.edu> 10:39 AM (29 minutes ago)

to me

Hello, Professor Schell,

We would certainly accept these three courses in transfer. They would be articulated as equivalent to OSU's CHN 111, 112 and 113, First-Year Chinese.

If you'd be so kind as to let me know when your courses are approved, I'll see that they are recorded in our transfer course database.

Best regards,

Judy

Judy Dahlem
Articulation Coordinator
Office of Admissions
Oregon State University
judy.dahlem@oregonstate.edu
541-737-2249

See other side

Mail

More

Transferability of First Year Chinese

Inbox x

Inbox (984)
Starred
Sent Mail
Drafts (7)
Junk Mail (381)
RSS Feeds.dup1 (2)
More

Tim +

No recent chats
Start a new one

Tim Schell
Dear Brooke, I am writing you regarding a new course we are preparing to take...

Brooke Hewitt
to me

Hi Tim!

Here is the link to our transfer tables and articulation information:
https://www.eou.edu/registrar/transfer/

Also, here is a screen shot of the table & your course itself:

Institution Selected: Columbia Gorge Community Colle

Columbia Gorge Community Colle Eastern Oregon University

Subject	Course	Title	Subject	Course	Title	General Education Groups
CHN	101	1st Year Chinese	MODL	101	1st Year Chinese*AEH	Gen Ed-Aesthetics & Humanitie
CHN	102	1st Year Chinese	MODL	102	1st Year Chinese*AEH	Gen Ed-Aesthetics & Humanitie
CHN	103	1st Year Chinese	MODL	103	1st Year Chinese*AEH	Gen Ed-Aesthetics & Humanitie
CHN	201	2nd Year Chinese	MODL	201	2nd Year Chinese*AEH	Gen Ed-Aesthetics & Humanitie
CHN	202	2nd Year Chinese	MODL	201	2nd Year Chinese*AEH	Gen Ed-Aesthetics & Humanitie
CHN	203	2nd Year Chinese	MODL	203	2nd Year Chinese*AEH	Gen Ed-Aesthetics & Humanitie

(Return to Transfer Equivalency M

RELEASE: 7.3.3

These course will be accepted as MODL (Modern Language) for direct courses. Tl

Please let me know if you need any further information from me. Have a great da

Thanks!

Brooke Hewitt, MBA
Transfer Articulation Specialist
Registrar's Office - 541.962.3936
bhewitt@eou.edu

GET CONNECTED TO EOU

Check out how your classes will transfer over HERE!

Brooke Hewitt

8:33 AM (9 minutes ago)

to me

Hi Tim!

Here is the link to our transfer tables and articulation information:
https://www.eou.edu/registrar/transfer/

Also, here is a screen shot of the table & your course itself:

These course will be accepted as MODL (Modern Language) for direct courses. They will fulfill the foreign language required for students, the BA requirements, and they will also count as Gen Ed in the AEH section.

Please let me know if you need any further information from me. Have a great day!

Thanks!

Brooke Hewitt, MBA
Transfer Articulation Specialist
Registrar's Office - 541.962.3936
bhewitt@eou.edu

See other side

Mail

More

Re: CHN 101-103 Inbox x

Inbox (1,100)
Starred
Sent Mail
Drafts (14)
Junk Mail (384)
RSS Feeds.dup1 (2)
More

Tim +

Sally Earll
to me

Tim,
If you're basically following the PCC CCOG, which I think you are, yes, they should tra
sally

On Wed, Feb 7, 2018 at 12:16 PM, Tim Schell <tschell@cgcc.edu> wrote:

Dear Sally,

On January 24, 2018, I emailed you regarding transferability of the three first year C assume they will, but I need official word.

Thanks,

Tim Schell, MFA, RPCV
Chair, Writing, Reading, Literature and Foreign Language Department
Columbia Gorge Community College
Hood River-Indian Creek Campus
1730 College Way
Hood River, OR 97031-7502
(541) 506-6171 (Direct)
(541) 506-6000
Campus map, driving directions

No recent chats
Start a new one

Using 1.54 GB
Manage

Sally Earll

1:56 PM
(12 minutes
ago)

to me

Tim,
If you're basically following the PCC CCOG, which I think you are, yes, they should transfer quite smoothly.
sally

On Wed, Feb 7, 2018 at 12:16 PM, Tim Schell <tschell@cgcc.edu> wrote:
Dear Sally,

On January 24, 2018, I emailed you regarding transferability of the three first year Chinese courses. I will be running them through the Curriculum Committee in three weeks, but before I do so, I need to know if they would transfer to PCC. I assume they will, but I need official word.

Thanks,

Tim Schell, MFA, RPCV
Chair, Writing, Reading, Literature and Foreign Language Department
Columbia Gorge Community College
Hood River-Indian Creek Campus
1730 College Way
Hood River, OR 97031-7502
(541) 506-6171 (Direct)
(541) 506-6000
Campus map, driving directions

Re: CHN 101-103 Inbox x

See other side →

Gina Greco
to me, Suzanne

Dear Tim,

If you will be covering the material in Book One and Book Two, then my faculty have n

Thank you for the clarification.

All best,
Gina

On Mon, Feb 12, 2018 at 3:01 PM, Tim Schell <tschell@cgcc.edu> wrote:

Dear Dr. Greco,

Suzanne Snell sent me your response regarding my request for help with articulatin

Because our Curriculum Committee has not asked for required textbooks, I only put
we are basing our CHN courses on those of PCC, under which we used to have our

It is our desire to offer rigorous First Year Chinese that will transfer to PSU. I've re-
know if there is anything else I can do to assure that our First Year Chinese courses

Thank you for your consideration.

Tim Schell, MFA, RPCV
Chair, Writing, Reading, Literature and Foreign Language Department
Columbia Gorge Community College
Hood River-Indian Creek Campus
1730 College Way
Hood River, OR 97031-7502
(541) 506-6171 (Direct)
(541) 506-6000
Campus map, driving directions

Re: CHN 101-103

Inbox x

Gina Greco

3:04 PM
(25 minutes
ago)

to me, Suzanne

Dear Tim,

If you will be covering the material in Book One and Book Two, then my faculty have no problem awarding credit for the full first-year of Chinese at PSU, 101, 102, and 103.

Thank you for the clarification.

All best,
Gina

On Mon, Feb 12, 2018 at 3:01 PM, Tim Schell <tschell@cgcc.edu> wrote:
Dear Dr. Greco,

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Writing, Reading, Literature and Foreign Language	Submitter Name: Phone: Email:	Tim Schell 541-506-6171 tschell@cgcc.edu
Course Prefix and Number:	CHN 101	Course Title:	First Year Chinese
Course Credits:	5	Gen Ed Category:	☒ Arts and Letters ☐ Social Science ☐ Science, Comp. Sci., and Math
Course Description:	Emphasizes effective communication skills in both written and spoken Mandarin Chinese. Provides an understanding of practices of native Chinese culture. Helps beginners with language proficiency as well as cultural awareness. The first term in a three-term sequence. Prerequisite/concurrent: RD 115, WR 115. Audit available.		
Course Outcomes:	1. Exchange basic greetings and communicate in predictable settings with appropriate vocabulary.		
	2. Pronounce Chinese phonetic symbols accurately.		
	3. Employ the understanding of basic Chinese syntactic system to read and compose simple colloquial Chinese texts in Chinese characters.		
	4. Apply basic cultural understanding and recognize cultural values when interacting with native Chinese speakers.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)

3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	1. Exchange basic greetings and communicate in predictable settings with appropriate vocabulary. The following communication themes will be covered: a. Introductions and leave takings b. Gratitude and apology c. Family d. Time and dates e. Invitations: acceptance and rejection f. Age, birth month and nationality g. Time, weather, telephone numbers and vocabulary of cost of goods and services h. Geography i. Numbers 2. Pronounce Chinese phonetic symbols accurately. Pronunciation drills 3. Employ the understanding of basic Chinese syntactic system to read and compose simple colloquial Chinese texts in Chinese characters. Grammar structures a. Verbs b. Interrogatives c. Personal pronouns d. Descriptive adjectives e. Word orders f. Conjunctions g. Reading and writing Chinese characters 4. Apply basic cultural understanding and recognize cultural values when interacting with native Chinese speakers. 1. Chinese Culture: Students will learn about dining etiquette; business etiquette; family culture; significance of Chinese holidays.

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	1. Exchange basic greetings and communicate in predictable settings with appropriate vocabulary. 2. Pronounce Chinese phonetic symbols accurately. 3. Employ the understanding of basic Chinese syntactic system to read and compose simple colloquial Chinese texts in Chinese characters. 4. Apply basic cultural understanding and recognize cultural values when interacting with native Chinese speakers. Throughout the course, students are required to compare and contrast between the linguistic, cultural and social values of their first language and those of the target language. This includes understanding of historical biases/events that might have influenced the ways they view certain cultural aspects. The language acquisition process is an intense, critical-thinking process of restructuring their view of themselves and of the world. • Chinese 101 requires critical-thinking skills, reasoning and evaluation of information in order to formulate the bases of comparison (and contrast) of their first language and Mandarin Chinese and thereby recognize the linguistic and cultural similarities and differences between the two languages and cultures. As students partake in tasks containing elements of personalization, investigation and problem solving using the target language, they must think critically. • Students will explore issues, ideas, literature, art, music, films, performing arts, content and events before accepting or formulating an opinion or conclusion. • Chinese Culture: Students will learn about dining etiquette; business etiquette; family culture; significance of Chinese holidays.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☐ in-depth ☐ minimally ☒ not addressed	
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☒ in-depth ☐ minimally ☐ not addressed	4. Apply basic cultural understanding and recognize cultural values when interacting with native Chinese speakers. Content: Viewing Chinese films; multi-cultural fairs on campus; interactions with peers; manage basic interactions, in both oral and written forms, in highly predictable settings using basic vocabulary in the present tense; develop circumlocution and inference skills, at a beginning level, when navigating a limited number of real world situations in Chinese;

	recognize linguistic and cultural diversity within the Chinese-speaking world and how it differs and/or relates to one's own culture; identify selected historical and cultural movements in the target culture through exposure to literature, art, music, film and/or performing arts in the target language; acquire strategies for analyzing authentic materials in the target language. Chinese Culture: Students will learn about dining etiquette; business etiquette; family culture; significance of Chinese holidays.
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☐ minimally ☒ not addressed	

3. Address the AAOT Discipline Studies Outcomes and Criteria:	
Complete only the questions regarding outcomes and criteria for the category to which your course belongs - Art and Letters; Social Sciences; Science and Computer Science; or Mathematics.	
Arts and Letters	
Outcomes:	
As a result of taking General Education Arts & Letters courses, a student should be able to: • Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and • Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.	
Criteria:	
A course in Arts & Letters should: 1. Introduce the fundamental ideas and practices of the discipline and allow students to apply them. 2. Elicit analytical and critical responses to historical and/or cultural works, such as literature, music, language, philosophy, religion, and the visual and performing arts. 3. Explore the conventions and techniques of significant forms of human expression. 4. Place the discipline in a historical and cultural context and demonstrate its relationship with other discipline. And each course should also do at least one of the following: 1. Foster creative individual expression via analysis, synthesis, and critical evaluation; 2. Compare/contrast attitudes and values of specific historical periods or world cultures; and 3. Examine the origins and influences of ethical or aesthetic traditions.	
List the course outcome(s) from the course's CCOG that clearly reflect the above outcomes and criteria.*	1. Exchange basic greetings and communicate in predictable settings with appropriate vocabulary 2. Pronounce Chinese phonetic symbols accurately. 3. Employ the understanding of basic Chinese syntactic system to read and compose simple colloquial Chinese texts in Chinese characters 4. Apply basic cultural understanding and recognize cultural values when interacting with native Chinese speakers
***Note:** It must be clearly evident that the above outcomes are addressed within the course's outcomes. Between your answers to the two outcomes questions below, you need to address all of the first four criteria as well as at least one of the criteria listed in the second set of three.	

How does the course enable a student to "interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life"?	A. Through the course, students are required to compare and contrast between the linguistic, cultural and social values of their first language and those of the target language. This includes understanding of historical biases/events that might have influence the ways they view certain cultural aspects. The language acquisition process is an intense, critical-thinking process of restructuring their view of themselves and of the world. (Arts & Letters criteria # 1-4) B. The process of language learning helps students develop self-discipline, self-confidence, social awareness, and collaborative skills that will continue beyond the classroom. (#1) C. Class projects allow students to exercise their creativity while meeting the specified criteria. (#3)
How does the course enable a student to "critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues"?	A. The process of language acquisition requires students to become aware of their biases against their first culture and against other cultures. This includes understanding historical biases/events that might have influenced the ways they view certain cultural aspects. The language acquisition process is an intense, critical-thinking process of restructuring their view of themselves and of the world. (Arts & Letters criteria #1-4) B. Ranging from pronunciation to cultural values, language learning requires students to consistently compare between the linguistic, social, and cultural values of the first language and those of the target language. Therefore, students will become aware of their position within their culture as well as globally. (#1, #2 & #4) C. The course requires a variety of collaborative activities through which students will learn how to respect different perspectives and learning styles. (#2 & #3)

Section # 4 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Tim Schell	tschell@cgcc.edu	2/7/2018
Department Director	Email	Date
n/a		

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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 _____
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:	Writing, Reading, Literature and Foreign Language		Submitter name: phone: email:	Tim Schell 541-506-6171 tschell@cgcc.edu
Prefix and Course Number:	CHN 102		Credits:	5
Course Title: (60 characters max, including spaces)	First Year Chinese		Transcript Title: (30 characters max, including spaces)	First Year Chinese
May this course be repeated for credit?	☐ Yes ☒ No	For how many times total?	Contact hours	Lecture: 50 Lec/lab: Lab:
Reason for the new course	To broaden foreign language offerings.			

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: MTH 20 or equivalent placement test scores. 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 RD, 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: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ Placement into:		☐ Placement into:		
course prefix & number:	CHN 101	☒ Prerequisite	☐ Corequisite	☐ pre/co
course prefix & number:		☐ Prerequisite	☐ Corequisite	☐ pre/co
course prefix & number:		☐ Prerequisite	☐ Corequisite	☐ pre/co

Section #3 Course Description, Outcomes, and Content	
COURSE DESCRIPTION: Begin the course description with an active verb. Avoid using the phrases: This course will and/or Students will. Include course requisite recommendations in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.	
Emphasizes effective communication skills in both written and spoken Mandarin Chinese. Builds on language skills introduced in CHN 101. Provides an understanding of practices of native Chinese culture. Helps beginners with language proficiency as well as cultural awareness. The second term in a three-term sequence. Prerequisite: CHN 101. 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), not in the classroom outcomes. Three to six outcomes are recommended. See course outcomes guidelines on the curriculum website.	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Pronounce Chinese phonetic symbols accurately. 2. Exchange basic greetings and communicate in semi-predicable settings with appropriate vocabulary depending on age and gender. 3. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese. 4. Use the understanding of basic Chinese syntactic system to read and compose colloquial Chinese texts in Chinese characters. 5. Apply their understanding of Chinese to interact with native Chinese speakers.
Outcomes assessment strategies:	1. Active participation in interactive class activities, including individual, pair or group activities 2. Individual presentations 3. Contextual written tasks to assess reading, writing, cultural and aural competencies 4. Oral interviews with partners or instructor 5. Multimedia aids to improve listening skills, including short audio clips or films 6. Class discussions to enhance cultural awareness and knowledge
COURSE CONTENT, ACTIVITIES AND DESIGN	
Course activities and design (what teaching methods are recommended?):	The course is taught in an immersion style requiring various levels of collaboration, creativity, and critical-thinking skills. The course is designed to help student develop the control of their learning and respect toward different cultures through hands-on activities: 1. One-to-one interviews 2. Group, pair and individual activities 3. Group and individual projects and presentations 4. Class Drills 5. Multi-cultural activities
Course Content: Themes, Concepts, Issues and Skills: (should be connected to the outcomes)	Include all or most of the following: I. Vocabulary a. Transportation b. Telephone conversation c. Requests and responses

	d. Academic subjects e. School days f. Shopping g. Clothing h. Colors i. Locations and directions II. Pronunciation III. Grammar structures a. Verbs b. Interrogatives c. Personal pronouns d. Descriptive adjectives e. Word orders f. Affirmative and negative responses g. Complex word orders h. Conjunctions i. Modals j. Prepositions k. Descriptive complements l. Directional complements m. Adverbs n. Participles o. Topic-Comment sentences IV. Chinese characters: Reading/Writing V. Conversation Themes a. Shopping b. School life c. Introductions and leave takings d. Gratitude and apology e. Family f. Time and dates g. Invitations: acceptance and rejection h. Locations i. Giving Directions j. Formulate Requests k. Initiate and exchange basic greetings and self-introductions in culturally appropriate manner according to age and gender VI. Chinese Culture a. Telephone etiquette b. Chinese school structure c. Dining etiquette d. Business etiquette e. Family culture f. Chinese holidays
Department Notes (optional)	

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 currently requires us to certify that at least one OUS school will accept our new LDC course in transfer. We anticipate that the state will soon require evidence of transferability, possibly from more than one school before a new course is approved. It is important that we address these issues as early as possible in the development and internal approval process for new courses. 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 school will the course transfer to? List all	Portland Community College Oregon State University Eastern Oregon University University of Oregon Portland State University
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: (minimum one university, more preferred)	☒ Completed Transferability Status form ☒ E-mail correspondence with receiving institution ☐ Other - provide evidence
Identify comparables at Oregon schools	
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 a course is on the Gen Ed list).

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):	Any certificate with General Education Electives	# credits: varied
Name of degree(s):	Any degree with General Education Electives or General Electives	# credits: 90-106
Briefly explain how this course fits into the above program(s), i.e. requirement or elective:	Arts & Humanities discipline General Education 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	No.	

agreements that have been reached.	
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.	No.
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes ☐ No
Implementation term:	☐ Next available term after approval ☒ Specify term: Summer 2018
Allow 3-4 months to complete the new course approval process before the course can be scheduled. Note: Most LDC courses will implement in fall term depending on the formal approval process. There may be exceptions for LDC disciplines that operate as CTE programs.	

Section # 6 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Tim Schell	tschell@cgcc.edu	1/31/18
Department Director	Email	Date
n/a		

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.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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 submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Transfer/Articulation of Individual CGCC Courses

To be completed by CGCC faculty

Directions:
Complete this form with all applicable information and as much detail as possible. Include any communication you've had with faculty/staff at the OUS schools. When you have finished, e-mail this as an attachment to the Curriculum Office at: curriculum@cgcc.edu

Upon receipt of this form along with the Gen Ed Request form, your request for a general education designation will be included on the next Curriculum Committee agenda. **In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.**

Course #: CHN 102 Title: First Year Chinese

Credits: 5 Total Contact Hours: Lec: 50 Lab: Lec-Lab:

Course Description:

Emphasizes effective communication skills in both written and spoken Mandarin Chinese. Builds on language skills introduced in CHN 101. Provides an understanding of practices of native Chinese culture. Helps beginners with language proficiency as well as cultural awareness. The second term in a three-term sequence. Prerequisite: CHN 101. Audit available.

Course Prerequisites: CHN 101

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
- ☐ Requirement in major: (list major)_____
- ☐ Elective for major: (list major)_____
- ☒ Course Equivalency: PCC: CHN 102; EOU: CHN 102; OSU: CHN 112; PSU: CHN 102
- ☐ 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):

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

Signature: _____ Date: 1/31/18

Printed Name: Tim Schell Title: Chair
Department: Writing, Reading, Literature and Foreign Languages E-mail: tschell@cgcc.edu

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Writing, Reading, Literature and Foreign Language	Submitter Name: Phone: Email:	Tim Schell 541-506-6171 tschell@cgcc.edu
Course Prefix and Number:	CHN 102	Course Title:	First Year Chinese
Course Credits:	5	Gen Ed Category:	☒ Arts and Letters ☐ Social Science ☐ Science, Comp. Sci., and Math
Course Description:	Emphasizes effective communication skills in both written and spoken Mandarin Chinese. Builds on language skills introduced in CHN 101. Provides an understanding of practices of native Chinese culture. Helps beginners with language proficiency as well as cultural awareness. The second term in a three-term sequence. Prerequisite: CHN 101. Audit available.		
	1. Pronounce Chinese phonetic symbols accurately.		
	2. Exchange basic greetings and communicate in semi-predicable settings with appropriate vocabulary and etiquette.		
	3. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese.		
	4. Use the understanding of basic Chinese syntactic system to read and compose colloquial Chinese texts in Chinese characters.		
	5. Apply their understanding of Chinese to interact with native Chinese speakers.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

<table>
<tr><th colspan="2">2. Address CGCC Core Learning Outcomes:</th></tr>
<tr><td colspan="2">For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, “no changes” or “revised,” noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.</td></tr>
<tr><th colspan="2">Gen Ed designated courses are required to address CLOs 1 and 2 “in-depth.”</th></tr>
<tr><td>1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (Communication)

☒ in-depth **REQUIRED**</td><td>1. Pronounce Chinese phonetic symbols accurately.
Pronunciation drills

2. Exchange basic greetings and communicate in semi-predicable settings with appropriate vocabulary and etiquette.

• Include all or most of the following:
I. Vocabulary
• Transportation
• Telephone conversation
• Requests and responses
• Academic subjects
• School days
• Shopping
• Clothing
• Colors
• Locations and directions

II. Grammar structures
• Verbs
• Interrogatives
• Personal pronouns
• Descriptive adjectives
• Word orders
• Affirmative and negative responses
• Complex word orders
• Conjunctions
• Modals
• Prepositions
• Descriptive complements
• Directional complements
• Adverbs</td></tr>
</table>

	• Participles • Topic-Comment sentences III. Conversation Themes • Shopping • School life • Introductions and leave takings • Gratitude and apology • Family • Time and dates • Invitations: acceptance and rejection • Locations • Giving Directions 3. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese. a. Chinese Culture • Telephone etiquette • Chinese school structure • Dining etiquette • Business etiquette • Family culture • Chinese holidays 4. Use the understanding of basic Chinese syntactic system to read and compose colloquial Chinese texts in Chinese characters. • Chinese characters: Reading/Writing
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	1. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese. 2. Use the understanding of basic Chinese syntactic system to read and compose colloquial Chinese texts in Chinese characters. 3. Apply their understanding of Chinese to interact with native Chinese speakers. Throughout the course, students are required to compare and contrast between the linguistic, cultural and social values of their first language and those of the target language. This includes understanding of historical biases/events that might have influenced the ways they view certain cultural aspects. The language acquisition process is an intense, critical-thinking process of restructuring their view of themselves and of the world. • Chinese 102 requires critical-thinking skills, reasoning and evaluation of information in order to formulate the bases of comparison (and contrast) of their first language and Mandarin Chinese and thereby recognize the linguistic and cultural similarities and differences between the two languages and cultures. As students partake in tasks containing elements of personalization, investigation and problem solving using the target language, they must think critically.

	• Students will explore issues, ideas, literature, art, music, films, performing arts, content and events before accepting or formulating an opinion or conclusion. • Chinese Culture: Students will learn about dining etiquette; business etiquette; family culture; significance of Chinese holidays.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☐ in-depth ☐ minimally ☒ not addressed	
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☒ in-depth ☐ minimally ☐ not addressed	3. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese. 5. Apply their understanding of Chinese to interact with native Chinese speakers Content: Viewing Chinese films; multi-cultural fairs on campus; interactions with peers; manage basic interactions, in both oral and written forms, in highly predictable settings using basic vocabulary in the present tense; develop circumlocution and inference skills, at a beginning level, when navigating a limited number of real world situations in Chinese; recognize linguistic and cultural diversity within the Chinese-speaking world and how it differs and/or relates to one's own culture; identify selected historical and cultural movements in the target culture through exposure to literature, art, music, film and/or performing arts in the target language; acquire strategies for analyzing authentic materials in the target language. • Students will explore issues, ideas, literature, art, music, films, performing arts, content and events before accepting or formulating an opinion or conclusion. • Chinese Culture: Students will learn about dining etiquette; business etiquette; family culture; significance of Chinese holidays.
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☐ minimally ☒ not addressed	

3. Address the AAOT Discipline Studies Outcomes and Criteria:

Complete only the questions regarding outcomes and criteria for the category to which your course belongs - Art and Letters; Social Sciences; Science and Computer Science; or Mathematics.

Arts and Letters

Outcomes:

As a result of taking General Education Arts & Letters courses, a student should be able to:

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

Criteria:

A course in Arts & Letters should:

1. Introduce the fundamental ideas and practices of the discipline and allow students to apply them.
2. Elicit analytical and critical responses to historical and/or cultural works, such as literature, music, language, philosophy, religion, and the visual and performing arts.
3. Explore the conventions and techniques of significant forms of human expression.
4. Place the discipline in a historical and cultural context and demonstrate its relationship with other discipline.

And each course should also do at least one of the following:

1. Foster creative individual expression via analysis, synthesis, and critical evaluation;
2. Compare/contrast attitudes and values of specific historical periods or world cultures; and
3. Examine the origins and influences of ethical or aesthetic traditions.

List the course outcome(s) from the course's CCOG that clearly reflect the above outcomes and criteria.*	1. Pronounce Chinese phonetic symbols accurately. 2. Exchange basic greetings and communicate in semi-predicable settings with appropriate vocabulary and etiquette. 3. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese 4. Use the understanding of basic Chinese syntactic system to read and compose colloquial Chinese texts in Chinese characters. 5. Apply their understanding of Chinese to interact with native Chinese speakers.

***Note:** It must be clearly evident that the above outcomes are addressed within the course's outcomes. Between your answers to the two outcomes questions below, you need to address all of the first four criteria as well as at least one of the criteria listed in the second set of three.

How does the course enable a student to "interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life"?	A. Through the course, students are required to compare and contrast between the linguistic, cultural and social values of their first language and those of the target language. This includes understanding of historical biases/events that might have influence the ways they view certain cultural aspects. The language acquisition process is an intense, critical-thinking process of restructuring their view of themselves and of the world. (Arts & Letters criteria # 2-4) B. The process of language learning helps students develop self-discipline, self-confidence, social awareness, and collaborative skills that will continue beyond the classroom. (#2-#5) C. Class projects allow students to exercise their creativity while meeting the specified criteria. (#2 &#3)

How does the course enable a student to "critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues"?	A. The process of language acquisition requires students to become aware of their biases against their first culture and against other cultures. This includes understanding historical biases/events that might have influenced the ways they view certain cultural aspects. The language acquisition process is an intense, critical-thinking process of restructuring their view of themselves and of the world. (Arts & Letters criteria #1-5) B. Ranging from pronunciation to cultural values, language learning requires students to consistently compare between the linguistic, social, and cultural values of the first language and those of the target language. Therefore, students will become aware of their position within their culture as well as globally. (#2 - #5) C. The course requires a variety of collaborative activities through which students will learn how to respect different perspectives and learning styles. (#1-#5)

Section # 4 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Tim Schell	tschell@cgcc.edu	2/7/2018
Department Director	Email	Date
n/a		

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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 _____
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:	Writing, Reading, Literature and Foreign Language	Submitter name: phone: email:	Tim Schell 541-506-6171 tschell@cgcc.edu
Prefix and Course Number:	CHN 103	Credits:	5
Course Title: (60 characters max, including spaces)	First Year Chinese	Transcript Title: (30 characters max, including spaces)	First Year Chinese
May this course be repeated for credit? ☐ Yes ☒ No	For how many times total?	Contact hours	Lecture: 50 Lec/lab: Lab:
Reason for the new course	To broaden foreign language offerings.		

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: MTH 20 or equivalent placement test scores. 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 RD, 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: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ Placement into:		☐ Placement into:		
course prefix & number:	CHN 102	☒ Prerequisite	☐ Corequisite	☐ pre/co
course prefix & number:		☐ Prerequisite	☐ Corequisite	☐ pre/co
course prefix & number:		☐ Prerequisite	☐ Corequisite	☐ pre/co

Section #3 Course Description, Outcomes, and Content	
COURSE DESCRIPTION: Begin the course description with an active verb. Avoid using the phrases: This course will and/or Students will. Include course requisite recommendations in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.	
Emphasizes effective communication skills in both written and spoken Mandarin Chinese. Builds on language skills introduced in CHN 101 and 102. Provides an understanding of practices of native Chinese culture. Helps beginners with language proficiency as well as cultural awareness. The third term of a three-term sequence. Prerequisite: CHN 102. 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), not in the classroom outcomes. Three to six outcomes are recommended. See course outcomes guidelines on the curriculum website.	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Exchange daily greetings and communicate with appropriate etiquette and vocabulary when interacting with native Chinese speakers. 2. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese. 3. Use the understanding of more complex Chinese syntactic system to read and compose simple Chinese texts in Chinese characters to interact with their Chinese friends.
Outcomes assessment strategies:	1. Active participation in interactive class activities, including individual, pair or group activities 2. Individual presentations 3. Contextual written tasks to assess reading, writing, cultural and aural competencies 4. Oral interviews with partners or instructor 5. Multimedia aids to improve listening skills, including short audio clips or films 6. Class discussions to enhance cultural awareness and knowledge
COURSE CONTENT, ACTIVITIES AND DESIGN	
Course activities and design (what teaching methods are recommended?):	The course is taught in an immersion style requiring various levels of collaboration, creativity, and critical-thinking skills. The course is designed to help student develop the control of their learning and respect toward different cultures through hands-on activities: 1. One-to-one interviews 2. Group, pair and individual activities 3. Group and individual projects and presentations 4. Class Drills 5. Multi-cultural activities
Course Content: Themes, Concepts, Issues and Skills: (should be connected to the outcomes)	Include all or most of the following: I. Vocabulary a. Telephone conversation b. Dining out, ordering food c. Weather descriptions d. Seeing a doctor

e. Attending social events
f. Requests and responses
g. Academic subjects
h. School days
i. Shopping
j. Clothing
k. Colors
l. Locations and directions

II. Pronunciation

III. Grammar structures
a. Statements
b. Affirmative and negative responses
c. Interrogatives: confirmative and informative questions
d. Personal and demonstrative pronouns
e. Complex word orders
f. Conjunctions
g. Modals
h. Prepositions
i. Descriptive complements
j. Directional complements
k. Adverbs
l. Particles
m. Topic-Comment sentences
n. Comparative sentences
o. Resultative complements
p. Time duration
q. Reduplication of adjectives
r. Employ proper sentence conjunctions in complex sentences
s. Personal and demonstrative pronouns
t. Adverbs
u. Understand more complex Chinese syntactic system and phonetic symbols
v. Compose level-appropriated sentences and short paragraphs in Chinese characters
w. Read edited level-appropriated Chinese texts
x. Employ proper sentence conjunctions in complex sentences

IV. Chinese characters: Reading/Writing

V. Conversation Themes
a. Attending social events
b. Weather
c. Seeing the doctor
d. Introductions and leave takings
e. Gratitude and apology
f. Family
g. Time and dates
h. Invitations: acceptance and rejection
i. Locations

	j. Giving Directions VI. Chinese Culture a. Gift giving b. Food culture
Department Notes (optional)	

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 currently requires us to certify that at least one OUS school will accept our new LDC course in transfer. We anticipate that the state will soon require evidence of transferability, possibly from more than one school before a new course is approved. It is important that we address these issues as early as possible in the development and internal approval process for new courses. 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 school will the course transfer to? List all	Portland Community College Oregon State University Eastern Oregon University University of Oregon Portland State University
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: (minimum one university, more preferred)	☒ Completed Transferability Status form ☒ E-mail correspondence with receiving institution ☐ Other - provide evidence
Identify comparables at Oregon schools	
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 a course is on the Gen Ed list).

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):	Any certificate with General Education Electives	# credits: varied
Name of degree(s):	Any degree with General Education Electives or General Electives	# credits: 90-106

Briefly explain how this course fits into the above program(s), i.e. requirement or elective:	Arts & Humanities discipline General Education 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.
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.	No.
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes ☐ No
Implementation term:	☐ Next available term after approval ☒ Specify term: Summer 2018
Allow 3-4 months to complete the new course approval process before the course can be scheduled. Note: Most LDC courses will implement in fall term depending on the formal approval process. There may be exceptions for LDC disciplines that operate as CTE programs.	

Section # 6 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Tim Schell	tschell@cgcc.edu	1/31/18
Department Director	Email	Date
n/a		

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.
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Transfer/Articulation of Individual CGCC Courses

To be completed by CGCC faculty

Directions:
Complete this form with all applicable information and as much detail as possible. Include any communication you've had with faculty/staff at the OUS schools. When you have finished, e-mail this as an attachment to the Curriculum Office at: curriculum@cgcc.edu

Upon receipt of this form along with the Gen Ed Request form, your request for a general education designation will be included on the next Curriculum Committee agenda. **In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.**

Course #: CHN 103 Title: First Year Chinese

Credits: 5 Total Contact Hours: Lec: 50 Lab: 0 Lec-Lab: 0

Course Description:
Emphasizes effective communication skills in both written and spoken Mandarin Chinese. Builds on language skills introduced in CHN 101 and 102. Provides an understanding of practices of native Chinese culture. Helps beginners with language proficiency as well as cultural awareness. The third term of a three-term sequence. Prerequisite: CHN 102. Audit available.

Course Prerequisites: CHN 102

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
- ☐ Requirement in major: (list major)_____
- ☐ Elective for major: (list major)_____
- ☒ Course Equivalency: PCC: CHN 103; EOU: CHN 103; OSU: CHN 113; PSU: CHN 103
- ☐ 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):

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

Signature: _____ Date: 1/31/18

Printed Name: Tim Schell Title: Chair

Department: Writing, Reading, Literature and Foreign Languages E-mail: tschell@cgcc.edu

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Writing, Reading, Literature and Foreign Language	Submitter Name: Phone: Email:	Tim Schell 541-506-6171 tschell@cgcc.edu
Course Prefix and Number:	CHN 103	Course Title:	First Year Chinese
Course Credits:	5	Gen Ed Category:	☒ Arts and Letters ☐ Social Science ☐ Science, Comp. Sci., and Math
Course Description:	Emphasizes effective communication skills in both written and spoken Mandarin Chinese. Builds on language skills introduced in CHN 101 and 102. Provides an understanding of practices of native Chinese culture. Helps beginners with language proficiency as well as cultural awareness. The third term of a three-term sequence. Prerequisite: CHN 102. Audit available.		
Course Outcomes:	1. Exchange daily greetings and communicate with appropriate vocabulary and etiquette when interacting with native Chinese speakers.		
	2. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese.		
	3. Use the understanding of more complex Chinese syntactic system to read and compose simple Chinese texts in Chinese characters to interact with their Chinese friends.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
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   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)

3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
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5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	1. Exchange daily greetings and communicate with appropriate vocabulary and etiquette when interacting with native Chinese speakers. • Include all or most of the following: I. Vocabulary • Transportation • Telephone conversation • Requests and responses • Academic subjects • School days • Shopping • Clothing • Colors • Locations and directions • Weather descriptions • Seeing a doctor • Attending social events II. Grammar structures • Verbs • Interrogatives • Personal pronouns • Descriptive adjectives • Word orders • Affirmative and negative responses • Complex word orders • Conjunctions • Modals • Prepositions • Descriptive complements • Directional complements • Adverbs • Participles • Topic-Comment sentences

	III. Conversation Themes • Shopping • School life • Introductions and leave takings • Gratitude and apology • Family • Time and dates • Invitations: acceptance and rejection • Locations • Giving Directions • Formulate Requests • Initiate and exchange basic greetings and self-introductions in culturally appropriate manner according to age and gender 2. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese. Chinese Culture • Telephone etiquette • Chinese school structure • Dining etiquette • Business etiquette • Family culture • Chinese holidays 3. Use the understanding of more complex Chinese syntactic system to read and compose simple Chinese texts in Chinese characters to interact with their Chinese friends. • Chinese characters: Reading/Writing
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	1. Exchange daily greetings and communicate with appropriate vocabulary and etiquette when interacting with native Chinese speakers. 2. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese. 3. Use the understanding of more complex Chinese syntactic system to read and compose simple Chinese texts in Chinese characters to interact with their Chinese friends. Throughout the course, students are required to compare and contrast between the linguistic, cultural and social values of their first language and those of the target language. This includes understanding of historical biases/events that might have influenced the ways they view certain cultural aspects. The language acquisition process is an intense, critical-thinking process of restructuring their view of themselves and of the world. • Chinese 103 requires critical-thinking skills, reasoning and evaluation of information in order to formulate the bases of comparison (and contrast) of their first language and Mandarin Chinese and thereby recognize the linguistic and cultural similarities and differences between the two languages and cultures.

	As students partake in tasks containing elements of personalization, investigation and problem solving using the target language, they must think critically. Students will explore issues, ideas, literature, art, music, films, performing arts, content and events before accepting or formulating an opinion or conclusion. • Chinese Culture: Students will learn about dining etiquette; business etiquette; family culture; significance of Chinese holidays. • Students will explore issues, ideas, literature, art, music, films, performing arts, content and events before accepting or formulating an opinion or conclusion.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☐ in-depth ☐ minimally ☒ not addressed	
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☒ in-depth ☐ minimally ☐ not addressed	2. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese. Content: Viewing Chinese films; multi-cultural fairs on campus; interactions with peers; manage basic interactions, in both oral and written forms, in highly predictable settings using basic vocabulary in the present tense; develop circumlocution and inference skills, at a beginning level, when navigating a limited number of real world situations in Chinese; recognize linguistic and cultural diversity within the Chinese-speaking world and how it differs and/or relates to one's own culture; identify selected historical and cultural movements in the target culture through exposure to literature, art, music, film and/or performing arts in the target language; acquire strategies for analyzing authentic materials in the target language. • Students will explore issues, ideas, literature, art, music, films, performing arts, content and events before accepting or formulating an opinion or conclusion. • Chinese Culture: Students will learn about dining etiquette; business etiquette; family culture; significance of Chinese holidays.

5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☐ minimally ☒ not addressed	

3. Address the AAOT Discipline Studies Outcomes and Criteria:	
Complete only the questions regarding outcomes and criteria for the category to which your course belongs - Art and Letters; Social Sciences; Science and Computer Science; or Mathematics.	
Arts and Letters	
Outcomes:	
As a result of taking General Education Arts & Letters courses, a student should be able to: • Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and • Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.	
Criteria:	
A course in Arts & Letters should: 1. Introduce the fundamental ideas and practices of the discipline and allow students to apply them. 2. Elicit analytical and critical responses to historical and/or cultural works, such as literature, music, language, philosophy, religion, and the visual and performing arts. 3. Explore the conventions and techniques of significant forms of human expression. 4. Place the discipline in a historical and cultural context and demonstrate its relationship with other discipline. And each course should also do at least one of the following: 1. Foster creative individual expression via analysis, synthesis, and critical evaluation; 2. Compare/contrast attitudes and values of specific historical periods or world cultures; and 3. Examine the origins and influences of ethical or aesthetic traditions.	
List the course outcome(s) from the course's CCOG that clearly reflect the above outcomes and criteria.*	1. Exchange daily greetings and communicate with gender and age appropriate vocabulary when interact with native Chinese speakers. 2. Apply common cultural understandings and recognize cultural values when interacting with native speakers of Chinese. 3. Use the understanding of more complex Chinese syntactic system to read and compose simple Chinese texts in Chinese characters to interact with their Chinese friends.
***Note:** It must be clearly evident that the above outcomes are addressed within the course's outcomes. Between your answers to the two outcomes questions below, you need to address all of the first four criteria as well as at least one of the criteria listed in the second set of three.	
How does the course enable a student to "interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life"?	A. Through the course, students are required to compare and contrast between the linguistic, cultural and social values of their first language and those of the target language. This includes understanding of historical biases/events that might have influence the ways they view certain cultural aspects. The language acquisition process is an intense, critical-thinking process of restructuring their view of themselves and of the world. (Arts & Letters criteria #1-3)

	B. The process of language learning helps students develop self-discipline, self-confidence, social awareness, and collaborative skills that will continue beyond the classroom. (#1-3) C. Class projects allow students to exercise their creativity while meeting the specified criteria. (#1-3)
How does the course enable a student to "critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues"?	A. The process of language acquisition requires students to become aware of their biases against their first culture and against other cultures. This includes understanding historical biases/events that might have influenced the ways they view certain cultural aspects. The language acquisition process is an intense, critical-thinking process of restructuring their view of themselves and of the world. (Arts & Letters criteria #1-3) B. Ranging from pronunciation to cultural values, language learning requires students to consistently compare between the linguistic, social, and cultural values of the first language and those of the target language. Therefore, students will become aware of their position within their culture as well as globally. (#1-3) C. The course requires a variety of collaborative activities through which students will learn how to respect different perspectives and learning styles. (#1-3)

Section # 4 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Tim Schell	tschell@cgcc.edu	2/7/2018
Department Director	Email	Date
n/a		

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

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	☒ Prerequisites and co-requisites
☐ Title	☐ Outcomes
☒ Description	

Section #1 General Information			
Department	CTE	Submitter name Phone Email	Mary Kramer 541-506-6033 mkramer@cgcc.edu
Current prefix and number	BA 228	Proposed prefix and number	No change
Current course title	Computer Accounting Applications	Proposed title (60 characters max)	No change
Reason for title change	No change	Proposed transcript title (30 characters max)	No change

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin the course description with an active verb. **Avoid** using the phrases: This course will and/or students will. Include recommendations and requisites in description. Guidelines for writing descriptions can be found at Writing a Course Description.

Current Description (required whether being revised or not)	Proposed Description
Introduces double-entry, fully-integrated computerized general ledger software. Includes general ledger, accounts receivable, accounts payable, payroll, fixed assets, bank reconciliations, inventory, and Financial Statement Analysis. Prerequisites: BA 101, BA 104, BA 131 or CAS 133, BA 211. Prerequisite/concurrent: BA 212. Audit available.	Introduces double-entry, fully-integrated computerized general ledger software. Includes general ledger, accounts receivable, accounts payable, payroll, fixed assets, bank reconciliations, inventory, and Financial Statement Analysis. Prerequisites: BA 111 or BA 211, Recommended: BA 104, CAS 133. Audit available.

Reason for change	To include revised requisites.

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), not in the classroom outcomes. Three to six outcomes are recommended. See the Writing Learning Outcomes guidelines on the curriculum office webpage for more guidance.

Current learning outcomes (required whether being revised or not)	New learning outcomes
1. Organize accounting procedures using microcomputer software. 2. Communicate effectively using standard accounting terminology. 3. Interpret and prepare accounting reports and records.	

Reason for change	No changes.

REQUISITES: Note: If this course has been approved for the Gen Ed list, it will have, as a default the following requisites: "Prerequisite: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121." If the department wants to set the RD, 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: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121			
☐ Placement into:			
prefix & number: BA 101, BA 104, BA 131 or CAS 133, BA 211	☒ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number: BA 212	☐ Prerequisite	☐ Corequisite	☒ pre/con

Proposed prerequisites, corequisites and concurrent			
☐ Standard requisites - Prerequisite: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121			
☐ Placement into:			
prefix & number: BA 111 or 211, Recommended: BA 104, CAS 133	☒ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

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.	
Revision of prerequisite requirements has resolved issues of "hidden requirements" in the Administrative Office Professional AAS which is part of the CAS/OS program.	
Implementation term	☒ Next available term after approval ☐ Specify term(if AFTER the next available term)
Allow 4-6 months to complete the approval process before scheduling the course.	

Section #3 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Stephen Shwiff	sshwiff@cgcc.edu	02-26-2018
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	02-26-2018

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or RET 112). Send completed form electronically to curriculum@cgcc.cc.or.us.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Columbia Gorge Community College

NEW CERTIFICATE REQUEST

Submitted by: Mary Kramer	Email: mkramer@cgcc.edu	Phone: 541-506-6033	Department: CTE

(Double click on check boxes to activate dialog box)

SECTION #1 OVERVIEW					
Proposed Title:	Basic Computer Skills			Proposed Credits:	13
Reason for new certificate:	The Basic Computer Skills certificate is designed for students who lack basic computer skills. It provides a progression of skill development on the computer and an introduction to customer service intended to assist students in successfully entering the workforce.			Requested implementation term:	Fall 2018
Impact on other areas of instruction: Have you talked to other departments? If yes, explain:	☒ Yes ☐ No	Explain: The Pre-College and CA/OS Advisory Committees support the implementation of this certificate. The CTE and Pre-College departments have been in close collaboration on this certificate.		Has the certificate been validated by the Advisory Committee?	☒ Yes ☐ No
Is this a Statewide Certificate?	☐ Yes ☒ No	If so, has the certificate been approved by the consortium?		☐ Yes ☐ No	
Is this a Related Certificate?	☐ Yes ☒ No	Is this a Career Pathway?		☒ Yes ☐ No	
If this is a Related Certificate or a Career Pathway, what is the base degree?	Administrative Assistant AAS				

SECTION #2 PREREQUISITES AND OUTCOMES		
PROPOSED PREREQUISITES		
Course Number	**Course Title or Placement level**	**Credits**
WR 115	Introduction to Expository Writing	4
RD 115	Critical Reading	4

Is this a limited entry program? Students must apply, via the department for program entry.	☐ Yes ☒ No

PROPOSED OUTCOMES
Describe what students are intended to be able to do "out there" (in life roles: worker, family member, community citizen, global citizen, and life-long learner), as opposed to a classroom activity "in here"? Good outcomes statements will suggest context to indicate this "out there" and they will describe what students can DO with what they know. See writing learning outcomes on the curriculum website.
Students who complete this certificate will be able to:
1. Apply computer keyboarding skills to workplace documents.
2. Utilize workplace software to complete basic documents.
3. Employ basic operations of a computer.
4. Create a favorable impression with customers and display a positive attitude

SECTION #3 PROPOSED COURSEWORK

List all courses in the term by term order that is to be displayed in the catalog certificate map. Include elective list below. The information you provide on this form will be reflected in the CGCC catalog pages. Please ensure it is correct. (If you need more lines to accommodate the courses, right click and insert rows.)

Course Number	Course Title	Prerequisites	Credits
Fall term			
CAS 121	Beginning Keyboarding	Rec: Placement into RD 90, WR 90; CAS 103W	3
Winter term			
CAS 103W	Intro to Computers	Prereq: placement into RD 115, WR 115 Rec: CAS 121 or equiv keyboarding skills	1
CAS 122	Keyboarding for Speed and Accuracy	Prereq: CAS 121; placement into RD 90, WR 90; Rec: CAS 103W and keying 24 wpm	3
Spring term			
CAS 133	Intro to Office Software	Rec: RD 115, WR 115, CAS 121 or keyboarding by touch	4
BA 188	Customer Service Skills	Prereq: RD 115, WR 115 or test	2
		Credit total	13

ELECTIVES (if applicable)		
Course Number	**Course Title**	**Credits**
	None	

SECTION #4 RELATED INSTRUCTION
Certificates 45 credits or more require related instruction. Fill out a Template for Related Instruction located on the Curriculum web page. All courses identified as fulfilling the embedded related instruction requirement must have been reviewed and recommended by the Curriculum Committee and the details outlined on the CCOG.

Section #5 DEPARTMENT REVIEW		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Stephen Shwiff	sshwiff@cgcc.edu	2.27.18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2.27.18

Next steps:

1. Save the completed Certificate Request Form and submit as an e-mail attachment to curriculum@cgcc.cc.or.us.
2. If needed, attach the completed Related Instruction Template to the same e-mail.
3. Complete the Degree/Certificate Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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.
4. Submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. It is required for a representative to attend the Curriculum Committee meeting in which your submission is scheduled for review. The representative will be asked to describe the proposal and respond to any committee questions.

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	☒ Prerequisites and co-requisites
☐ Title	☐ Outcomes
☒ Description	

Section #1 General Information			
Department	Science	Submitter name Phone Email	Mary Kramer 541-506-6033 mkramer@cgcc.edu
Current prefix and number	BI 121	Proposed prefix and number	No change
Current course title	Introduction to Human Anatomy and Physiology I	Proposed title (60 characters max)	No change
Reason for title change	No change	Proposed transcript title (30 characters max)	No change

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin the course description with an active verb. **Avoid** using the phrases: This course will and/or students will. Include recommendations and requisites in description. Guidelines for writing descriptions can be found at Writing a Course Description.

Current Description (required whether being revised or not)	Proposed Description
Surveys anatomical terminology, basic chemistry, cell structure and function, tissues, and the following systems: integumentary, skeletal, muscular, and nervous. Involves lecture discussions complemented by physiological laboratory exercises, dissections, microscopy, and multimedia. Prerequisite: MTH 60 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.	Surveys anatomical terminology, basic chemistry, cell structure and function, tissues, and the following systems: integumentary, skeletal, muscular, and nervous. Involves lecture discussions complemented by physiological laboratory exercises, dissections, microscopy, and multimedia. Prerequisite: MTH 60 or MTH 98 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.
Reason for change	To include revised requisites.

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), not in the classroom outcomes. Three to six outcomes are recommended. See the Writing Learning Outcomes guidelines on the curriculum office webpage for more guidance.

Current learning outcomes (required whether being revised or not)	New learning outcomes
1. Apply concepts and knowledge of the general terminology, cell structure and function, histology, gross anatomy, and physiology related to the integumentary, skeletal, muscular and nervous systems to novel technical and/or clinical scenarios. 2. Research and critically evaluate various sources of information related to these systems in order to discern reliable scientific information from unsourced information and "pseudo science". 3. Communicate information related to these systems through written, verbal, or multimedia formats in order to assess current knowledge, answer investigative questions, and explore new questions for additional research. 4. Evaluate information on human health and medical research as to its social, environmental, and ethical implications as part of responsible citizenship. 5. Use scientific laboratory equipment in order to gather and analyze data on human anatomy and physiology. 6. Use an understanding of how these human organ systems are interrelated to apply a holistic approach to human health.	

Reason for change	No changes

REQUISITES: Note: If this course has been approved for the Gen Ed list, it will have, as a default the following requisites: "Prerequisite: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121." If the department wants to set the RD, 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: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121

☐ Placement into:

prefix & number: MTH 60 or equivalent placement test scores	☒ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number: WR 121	☐ Prerequisite	☐ Corequisite	☒ pre/con

Proposed prerequisites, corequisites and concurrent			
☐ Standard requisites - Prerequisite: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121			
☐ Placement into:			
prefix & number: MTH 60 or MTH 98 or equivalent placement test scores	☒ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number: WR 121	☐ Prerequisite	☐ Corequisite	☒ pre/con

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.	
Math prerequisite change requested by the Medical Assisting program so that students following a MTH 98/105/243 track would be able to completed MA program prerequisites. The MA program has determined that the either MTH track is adequate to the needs of its students. The Science department has agreed that students with MTH 98 will be adequately prepared to do the work in BI 121.	
Implementation term	☐ Next available term after approval ☒ Specify term(if AFTER the next available term) Summer 2018
Allow 4-6 months to complete the approval process before scheduling the course.	

Section #3 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	02-26-2018
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	02-26-2018

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or RET 112). Send completed form electronically to curriculum@cgcc.cc.or.us.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

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	☒ Prerequisites and co-requisites
☐ Title	☐ Outcomes
☒ Description	

Section #1 General Information			
Department	Math	Submitter name Phone Email	Mary Kramer 541-506-6033 mkramer@cgcc.edu
Current prefix and number	MTH 105	Proposed prefix and number	No change
Current course title	Math in Society	Proposed title (60 characters max)	No change
Reason for title change	No change	Proposed transcript title (30 characters max)	No change

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin the course description with an active verb. **Avoid** using the phrases: This course will and/or students will. Include recommendations and requisites in description. Guidelines for writing descriptions can be found at Writing a Course Description.

Current Description (required whether being revised or not)	Proposed Description
Explores applications of mathematics in society including quantitative techniques in personal and public finance, basic probability and statistics for understanding risk and uncertainty, and concepts and applications of formal logic to argumentation and persuasion. Investigates a variety of mathematical problem-solving techniques and provides a sampling of more advanced mathematics or mathematics-related topics. Integrates technology where appropriate. Prerequisites: MTH 95 or MTH 98 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.	Explores applications of mathematics in society including quantitative techniques in personal and public finance, basic probability and statistics for understanding risk and uncertainty, and concepts and applications of formal logic to argumentation and persuasion. Investigates a variety of mathematical problem-solving techniques and provides a sampling of more advanced mathematics or mathematics-related topics. Integrates technology where appropriate. Prerequisites: MTH 65 or MTH 98 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Reason for change	To reflect revised prerequisite math requirement for course.

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), not in the classroom outcomes. Three to six outcomes are recommended. See the Writing Learning Outcomes guidelines on the curriculum office webpage for more guidance.	
Current learning outcomes (required whether being revised or not)	New learning outcomes
1. Use relevant mathematical concepts and techniques to critically analyze and make knowledgeable decisions about issues in personal and public finance. 2. Use relevant concepts and techniques from probability and statistics to critically analyze and make knowledgeable decisions about problems involving risk and uncertainty. 3. Construct, interpret, and critique the graphical display of information. 4. Formulate logically rigorous arguments and critique those that are not. 5. Effectively communicate orally and in writing arguments and results based on quantitative and other rigorous forms of mathematical reasoning.	

Reason for change	No changes

REQUISITES: Note: If this course has been approved for the Gen Ed list, it will have, as a default the following requisites: "Prerequisite: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121." If the department wants to set the RD, 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: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121			
☐ Placement into:			
prefix & number: MTH 95 or MTH 98 or equivalent placement test scores	☒ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number: WR 121	☐ Prerequisite	☐ Corequisite	☒ pre/con

Proposed prerequisites, corequisites and concurrent			
☐ Standard requisites - Prerequisite: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121			
☐ Placement into:			
prefix & number: MTH 65 or MTH 98 or equivalent placement test scores	☒ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number: WR 121	☐ Prerequisite	☐ Corequisite	☒ pre/con

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	☒ Next available term after approval ☐ Specify term(if AFTER the next available term)
Allow 4-6 months to complete the approval process before scheduling the course.	

Section #3 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
John Evans	jevans@cgcc.edu	2.28.18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2.28.18

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or RET 112). Send completed form electronically to curriculum@cgcc.cc.or.us.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Columbia Gorge Community College

New Course
Lower Division Collegiate (LDC)

(Double click on check boxes to activate dialog box)

Section #1 General Information

Department:	Science		Submitter name: phone: email:	Mary Kramer 541-506-6033 mkramer@cgcc.edu
Prefix and Course Number:	PE 182K		Credits:	1
Course Title: (60 characters max, including spaces)	Hot Yoga		Transcript Title: (30 characters max, including spaces)	Hot Yoga
May this course be repeated for credit?	☒ Yes ☐ No	For how many times total? 3	Contact hours	Lecture: 0 Lec/lab: 0 Lab: 30
Reason for the new course	Expand PE offerings			

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: MTH 20 or equivalent placement test scores. 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 RD, 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: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ Placement into:		☐ Placement into:		
course prefix & number:		☐ Prerequisite	☐ Corequisite	☐ pre/co
course prefix & number:		☐ Prerequisite	☐ Corequisite	☐ pre/co
course prefix & number:		☐ Prerequisite	☐ Corequisite	☐ pre/co

Section #3 Course Description, Outcomes, and Content	
COURSE DESCRIPTION: Begin the course description with an active verb. Avoid using the phrases: This course will and/or Students will. Include course requisite recommendations in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.	
Introduces yoga with an emphasis on challenging sequences and balancing poses. Focuses on opening the shoulders, hips and spine as well as strengthening core and upper body. Practiced in a heated environment. 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), not in the classroom outcomes. Three to six outcomes are recommended. See course outcomes guidelines on the curriculum website.	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Develop an intermediate yoga practice. 2. Maintain a fitness and wellness program that incorporates yoga. 3. Demonstrate improved physical conditioning.
Outcomes assessment strategies:	1. Performance evaluation 2. Class presentation or demonstration 3. Pre and post measurements
COURSE CONTENT, ACTIVITIES AND DESIGN	
Course activities and design (what teaching methods are recommended?):	1. Perform prescribed sequences 2. Develop safe and effective yoga poses 3. Improve physical conditioning
Course Content: Themes, Concepts, Issues and Skills: (should be connected to the outcomes)	1. Review of yoga philosophies and language 2. Benefits of heated environment for yoga 3. Balance and flexibility techniques 4. Kinesthetic awareness 5. Improving strength and alignment 6. Understanding safe and effective yoga poses
Department Notes (optional)	

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 currently requires us to certify that at least one OUS school will accept our new LDC course in transfer. We anticipate that the state will soon require evidence of transferability, possibly from more than one school before a new course is approved. It is important that we address these issues as early as possible in the development and internal approval process for new courses. 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 school will the course transfer to? List all	This course will apply to the Health/Wellness/Fitness requirements for the AAOT.
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: (minimum one university, more preferred)	☐ Completed Transferability Status form ☐ E-mail correspondence with receiving institution ☐ Other - provide evidence
Identify comparables at Oregon schools	
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 a course is on the Gen Ed list).

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):	All with general electives	# credits: 90-108
Briefly explain how this course fits into the above program(s), i.e. requirement or elective:	Elective and/or Health/Wellness/Fitness requirement	
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	
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.	no	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes ☐ No	

Implementation term:	☒ Next available term after approval ☐ Specify term:
Allow 3-4 months to complete the new course approval process before the course can be scheduled. Note: Most LDC courses will implement in fall term depending on the formal approval process. There may be exceptions for LDC disciplines that operate as CTE programs.	

Section # 6 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	02-27-2018
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	02-27-2018

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.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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 submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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 _____
CC decision _____
CC vote _____

Columbia Gorge Community College

New Course – Non-Credit

(double click on check boxes to activate dialog box)

Section #1 General Information			
Department:	Instructional Services	Submitter name Phone Email	Suzanne Burd 541.506.6123 sburd@cgcc.edu
Course Prefix and Number:	NCT 60	Course Title: 60 characters max	Welding Basics
Can this class be repeated?	☒ Yes ☐ No How many times? Unlimited	Contact hours	Lecture (# of hours): Lec/Lab (# of hours): 40 Lab (# of hours): NCTC (# of hours):
Reason for new course		This new course is being requested by the CTE director. Moving from credit to non-credit offering.	
Is this course equivalent to another? If yes, they must have the same description and outcomes.		☒ Yes ☐ No	Course Number and Title WLD 190

REQUISITES: Identify prerequisite, corequisite, and concurrent course(s)			
Course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/con
Course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/con
Placement into:			
Placement into:			

COURSE DESCRIPTION: Begin the course description with an active verb. Avoid using the phrases: This course will and/or Students will. Include course requisites recommendations in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Provides basic knowledge of and practice in welding processes. Covers how to perform welding in accordance with industry standards.

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), not in the classroom outcomes. Three to six outcomes are recommended. See course outcomes guidelines on the curriculum website.

Learning Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to:
	1. Function safely in a welding shop environment
	2. Operate oxyacetylene portable and track cutting systems in accordance with industry standards.

	3. Apply knowledge of GTAW, SMAW, & GMAW process to complete welds in the flat, horizontal, vertical and overhead position.
	4. Interpret blueprints and shop drawings to produce proper weld sizes and profiles.
	5. Use an understanding of welding codes and industry standards in order to weld common joint configurations.
Outcomes assessment strategies: (from CCOG)	The student will be assessed on his/her ability to demonstrate the development of course outcomes. The methods of assessment may include one or more of the following: oral or written examinations, quizzes, observations, written assignments, visual inspection techniques, welding tests, safe work habits, task performance and work relations.
COURSE CONTENT, ACTIVITIES AND DESIGN	
Course activities and design: (from CCOG)	This is an outcome based course utilizing a lecture/lab format. This course includes classroom discussions, videotapes, lab demonstrations, supplemental textbook and technical skills.
Course Content: Themes, Concepts, Issues and Skills: (from CCOG they should be connected to the outcomes)	1. Students will complete Flat, Vertical, Horizontal, and Over-head welds using the GTAW, SMAW, & GMAW welding process. 2. Students will become familiar with basic metallurgy, welding symbols, and weld layout requirements. 3. Related Instruction will include skills in measuring, cutting and general fabrication skills for assembly. 4. Function safely in the CGCC Welding Shop. 5. Understand and practice personal safety by using proper protective gear. 6. Understand and practice hand tool and power tool safety. 7. Understand and practice equipment safety for welding and oxyacetylene cutting systems. 8. Understand and maintain a safe work area. 9. Recognize and report dangerous electrical and air/gas hose connections. 10. Understand and practice fire prevention. 11. Access and explain the importance of the Material Safety Data Sheets (MSDS). 12. Operate Oxyacetylene portable and track cutting systems in accordance with industry standards. 13. Demonstrate correct setup and shutdown procedures for the hand cutting and track cutting systems. 14. Perform Oxyacetylene cutting with guided practice. 15. Read welding symbols and interpreting the data for weld size and location that relate to blueprints and shop drawings.
Department Notes (optional)	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.

Section #2 Additional Information for new non-credit courses	
Briefly describe how this course prepares students for entry into credit programs	This is a standalone course and does not prepare students for entry into credit programs.
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.	Yes, WLD 190 is CURRENTLY a standalone course that will no longer be offered as a credit class. This will allow the class to continue to be offered, but as a community education class.
Have you consulted with the Department Chair(s) of other program(s) regarding potential impact such as content overlap, duplication, prerequisites, enrollment impact etc.? If yes, explain and/or describe the nature of acknowledgements or agreements that have been reached.	Yes, the CTE director requested this class be supported as a community education class/noncredit training certificate.
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes ☐ No
Implementation term:	☐ Next available term after approval ☒ Specify term: Fall 2018
Allow 1-2 months to complete the new non-credit course approval process before the course may be scheduled.	

Section # 3 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Suzanne Burd	sburd@cgcc.edu	3/01/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	3/01/18

NEXT STEPS:

NEW NON-CREDIT TRAINING CERTIFICATE REQUEST

Submitted by: Suzanne Burd	Email: sburd@cgcc.edu	Phone: (541) 506-6123	Department: Community Education

Columbia Gorge Community College

(Double click on check boxes to activate dialog box)

SECTION #1 OVERVIEW				
Proposed Title:	Welding Basics		Proposed Clock Hours:	40
Reason for new certificate:	This program serves students to develop skills that would assist them in personal and professional relationships that may lead to employment. Additionally CGCC was approached by the organization that contracted with the college to develop and deliver this course to request a college credential for completers.		Requested implementation term:	Fall 2018
Impact on other areas of instruction: Have you talked to other departments? If yes, explain:	☒ Yes ☐ No	Explain: The CTE director requested this class be supported as a community education class/non-credit training certificate.	Has the certificate been validated by an Advisory Committee or by industry partners?	☐ Yes ☒ No
Certificate CIP Code	48.0508			

SECTION #2 PREREQUISITES AND OUTCOMES		
PROPOSED PREREQUISITES		
Course Number	**Course Title or Placement level**	**Credits/Clock Hours**
	NA	
Is this a limited entry program? Students must apply, via the department for program entry.		☐ Yes ☒ No

PROPOSED OUTCOMES
Describe what students are intended to be able to do "out there" (in life roles: worker, family member, community citizen, global citizen, and life-long learner), as opposed to a classroom activity "in here"? Good outcomes statements will suggest context to indicate this "out there" and they will describe what students can DO with what they know. See writing learning outcomes on the curriculum website.
Students who complete this certificate will be able to:
1. Apply welding industry safety standards.
2. Operate oxyacetylene portable and track cutting systems in accordance with industry standards.
3. Apply knowledge of GTAW, SMAW, & GMAW process to complete welds in the flat, horizontal, vertical and overhead position.
4. Interpret blueprints and shop drawings to produce proper weld sizes and profiles.
5. Use an understanding of welding codes and industry standards in order to weld common joint configurations.

SECTION #3 PROPOSED COURSEWORK

List all courses in the term by term order that is to be displayed in the catalog certificate map. Include elective list below. The information you provide on this form will be reflected in the CGCC catalog pages. Please ensure it is correct. (If you need more lines to accommodate the courses, right click and insert rows.)

Course Number	Course Title	Cert Outcome included?	Clock Hours
NCT 60	Welding Basics	☒ Yes ☐ No	40
		☐ Yes ☐ No	
		Credit total	

ELECTIVES (if applicable)

Course Number	Course Title	Cert Outcome included?	Clock Hours
		☐ Yes ☐ No	

Section #5 DEPARTMENT REVIEW

This proposal has been reviewed at the Director level and approved for submission.

Department Chair	Email	Date
Suzanne Burd	sburd@cgcc.edu	3/1/2018
Department Director	**Email**	**Date**
Mary Kramer	mkramer@cgcc.edu	3/1/2018

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	☐ Prerequisites and co-requisites
☒ Title	☒ Outcomes
☒ Description	

Section #1 General Information			
Department	CTE – Electro-Mechanical Technology	Submitter name Phone Email	Jim Pytel 541 506 6000 7157 jpytel@cgcc.edu
Current prefix and number	MEC120	Proposed prefix and number	MEC120
Current course title	Hydraulics	Proposed title (60 characters max)	Fluid Power and Electrical Control of Fluid Power Systems
Reason for title change	Addition of pneumatic systems.	Proposed transcript title (30 characters max)	Fluid Power

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin the course description with an active verb. **Avoid** using the phrases: This course will and/or students will. Include recommendations and requisites in description. Guidelines for writing descriptions can be found at Writing a Course Description.

Current Description (required whether being revised or not)	Proposed Description
Introduces the basic principles of hydraulics and applies these principles to build, maintain and troubleshoot industrial hydraulic circuits. Covers theory, generation, storage, transmission, and usage of hydraulic energy, pressure, and flow. Introduces hydraulic schematics and circuits as well as identification and operation of basic hydraulic components. Introduces basic ladder logic and PLCs to automate, control and modify an electrically controlled hydraulic system with solenoid-operated directional control valves. Includes a 3-hour per week laboratory session. Prerequisite: MTH 65. Audit available.	Introduces the basic principles of hydraulics and pneumatics and applies these principles to build, maintain and troubleshoot industrial hydraulic and pneumatics circuits. Covers theory, generation, storage, transmission, and usage of hydraulic and pneumatics energy, pressure, and flow. Introduces hydraulic and pneumatics schematics and circuits as well as identification and operation of basic hydraulic and pneumatics components. Introduces basic ladder logic and PLCs to automate, control and modify an electrically controlled hydraulic and pneumatics system with solenoid-operated directional control valves. Includes a 3-hour per week laboratory session. Prerequisite: MTH 65. Audit available.

Reason for change	Addition of pneumatic systems.

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), not in the classroom outcomes. Three to six outcomes are recommended. See the Writing Learning Outcomes guidelines on the curriculum office webpage for more guidance.

Current learning outcomes (required whether being revised or not)	New learning outcomes
1. Apply basic hydraulic principles to predict behavior of hydraulic circuits. 2. Build, operate, maintain, and troubleshoot manually controlled hydraulic circuits. 3. Write technical reports using collected experimental data. 4. Build, operate, maintain, and troubleshoot an electrically controlled hydraulic system. 5. Identify hydraulic components and determine their application in hydraulic circuits.	1. Apply basic hydraulic and pneumatic principles to predict behavior of hydraulic and pneumatic circuits. 2. Build, operate, maintain, and troubleshoot manually controlled hydraulic and pneumatic circuits. 3. Write technical reports using collected experimental data. 4. Build, operate, maintain, and troubleshoot an electrically controlled hydraulic and pneumatic system. 5. Identify hydraulic components and determine their application in hydraulic and pneumatic circuits.

Reason for change	Addition of pneumatic systems.

REQUISITES: Note: If this course has been approved for the Gen Ed list, it will have, as a default the following requisites: "Prerequisite: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121." If the department wants to set the RD, 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: MTH 20 or equivalent placement test scores. 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: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

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	☐ Next available term after approval ☒ Specify term(if AFTER the next available term) Summer, 2018
Allow 4-6 months to complete the approval process before scheduling the course.	

Section #3 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Stephen Shwiff	sshwiff@cgcc.edu	02-26-2018
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	02-26-2018

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or RET 112). Send completed form electronically to curriculum@cgcc.cc.or.us.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

Section #1 General Information				
Department:	CTE		Submitter name phone and email	Mary Kramer 541-506-6033 mkramer@cgcc.edu
Prefix and Course Number:	MEC 124		Credits:	3
Course Title: (60 characters max, including spaces)	Mechatronic Systems in Advanced Manufacturing		Transcript Title: (30 characters max, including spaces)	Mechatronics
May this course be repeated for credit?	☐ Yes ☒ No	For how many times?	Contact hours:	Lecture: 20 Lec/lab: 0 Lab: 30
Is this course equivalent to another? They must have the same description, outcomes and credit.			☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	As per the STEM Advisory Committee, add advanced manufacturing elements to the EM-Tech curriculum.			

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

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

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: Begin the course description with an active verb. Avoid using the phrases: This course will and/or Students will. Include course requisites recommendations in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Introduces the concepts, terms, and application of advanced manufacturing principles and practices and explores the role of mechatronic systems in the manufacturing process. Examines the management of manufacturing operations from complying with industry standards to forecasting and planning, equipment inventory and maintenance. Explores the applications of robots, computers, and control systems in a manufacturing environment. 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), not in the classroom outcomes. Three to six outcomes are recommended. See course outcomes guidelines on the curriculum website.	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to: 1. Demonstrate the management of operations in a manufacturing environment, including production flow, forecasting, planning, and scheduling. 2. Apply industry standards and record keeping in a manufacturing environment. 3. Apply proper application of computer-aided programs and equipment, robots, and/or control systems in a manufacturing environment.
Outcomes assessment strategies:	Evaluation is done via labs, quizzes, take home assignments, in class exercises, and exams.
COURSE CONTENT, ACTIVITIES AND DESIGN	
Course activities and design: (what teaching methods are recommended?)	• Lecture, discussion, online lessons, and lab exercises are the instructional methods used. • Laboratory activities include building, analyzing, and troubleshooting mechatronics systems.
Course Content: Themes, Concepts, Issues and Skills: (should be connected to the outcomes)	1. Mechatronics Systems 2. Operations management (including data management, procurement, equipment inventory and maintenance) 3. Machine vision 4. Automation and robotics 5. Servo-mechanics 6. Stepper motors 7. Sensors 8. Computer-machine controls, such as CNC and CAM, and computer-aided software, such as CAD 9. Advanced Manufacturing standards 10. Mechanical modeling 11. Systems safety 12. Additive and subtractive manufacturing
Department Notes (optional)	

Section #2 Function of the new course within an existing and/or new program(s)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☒ Yes ☐ No
Name of certificate(s):	Electro-Mechanical Technology	# credit: 43
Name of degree(s):	Electro-Mechanical Technology	# credit: 95

Will this new course be part of a new, proposed CGCC certificate or degree?		☐ Yes ☒ No
Name of new certificate(s):		# credit:
Name of new degree(s):		# credit:
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	
Is this course used to supply related instruction for a certificate?		☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.		

Section #3 Additional Information for new CTE courses	
Transferability: Will this course transfer to another academic institution? Identify	This course will transfer to OIT.
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	None other than the EM-Tech AAS and certificate.
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	no
Identify and consult with Department chairs who may be impacted by this course such as content overlap, course duplication, prerequisite, enrollment, etc.	
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	n/a
Is there any potential impact on another department?	☐ Yes ☒ No
If yes, explain and/or describe the nature of acknowledgments and/or agreements that have been reached	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes ☐ No
Implementation term:	☐ Next available term after approval ☒ Specific term AFTER next available: Summer 2018
Allow 3-4 months to complete the new course approval process before the course can be scheduled.	

Section # 4 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Stephen Shwiff	sshwiff@cgcc.edu	02-27-2018
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	02-27-2018

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or RET 112). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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 submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

--Columbia Gorge Community College

New Course
Career Technical Education (CTE)

(Double click on check boxes to activate dialog box)

Section #1 General Information				
Department:	CTE		Submitter name phone and email	Mary Kramer 541-506-6033 mkramer@cgcc.edu
Prefix and Course Number:	CIS 170		Credits:	3
Course Title: (60 characters max, including spaces)	Embedded Computing		Transcript Title: (30 characters max, including spaces)	Embedded Computing
May this course be repeated for credit?	☐ Yes ☒ No	For how many times?	Contact hours:	Lecture: 30 Lec/lab: 0 Lab: 0
Is this course equivalent to another? They must have the same description, outcomes and credit.			☐ Yes ☒ No	Prefix, number and title:
Reason for the new course.	Add industry-relevant computer programming to the EM-Tech program			

GRADE OPTIONS: Check as many or as few options as you'd like. **Choose the default grade option**. The default grade refers to the option that is listed at the top of the dropdown menu for the CRN. Students who do not make a choice or do not make a change in the dropdown menu will automatically be assigned to the default grade option.

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

REQUISITES: Identify prerequisite, corequisite and concurrent course(s)

☐ Standard requisites – Prerequisite: MTH 20 or equivalent placement test scores.
Prerequisite/concurrent: WR 121.

☐ placement into:	☐ placement into:		
course prefix & number: MTH 65 with B or better	☒ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co
course prefix & number:	☐ prerequisite	☐ corequisite	☐ pre/co

COURSE DESCRIPTION: Begin the course description with an active verb. Avoid using the phrases: This course will and/or Students will. Include course requisites recommendations in the description. Guidelines for writing concise descriptions can be found at Writing Course Descriptions.

Introduces programming concepts and principles relevant to electro-mechanical technology. Covers the C programming language, single-board computers, peripheral devices and networking. Prerequisites: MTH 65 (with "B" or better) or equivalent placement test scores. 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), not in the classroom outcomes. Three to six outcomes are recommended. See course outcomes guidelines on the curriculum website.	
Outcomes: (Use observable and measurable verbs)	Upon successful completion of this course, students will be able to:
	1. Program in the C language
	2. Design programs to respect the resource constraints of embedded systems
	3. Write programs that communicate using network protocols
	4. Control peripheral devices over a bus
Outcomes assessment strategies:	In-class exercises, out-of-class projects
COURSE CONTENT, ACTIVITIES AND DESIGN	
Course activities and design: (what teaching methods are recommended?)	Lecture, discussion, in-class exercises
Course Content: Themes, Concepts, Issues and Skills: (should be connected to the outcomes)	• Principles of programming • Programming concepts and design • Programming problem solving • C programming • Single board computers • Robots operation • Microcontrollers • Network and bus: hardware, protocols, software
Department Notes (optional)	

Section #2 Function of the new course within an existing and/or new program(s)		
New CTE courses must be attached to a degree and/or certificate. They cannot be offered until the degree or certificate is approved. Please answer below, as appropriate.		
Will this new course be part of existing, currently approved CGCC certificate(s) and/or degree(s)?		☒ Yes ☐ No
Name of certificate(s):	Electro-Mechanical Technology	# credit: 43
Name of degree(s):	Electro-Mechanical Technology	# credit: 95
Will this new course be part of a new, proposed CGCC certificate or degree?		☐ Yes ☒ No
Name of new certificate(s):		# credit:
Name of new degree(s):		# credit:
Briefly explain how this course fits into the new or existing degrees /certificates noted above (i.e. requirement or elective):	Required course	

Is this course used to supply related instruction for a certificate?	☐ Yes ☒ No
If **yes,** the related instruction form, available on the curriculum office website, must be completed and submitted together with this form.	

Section #3 Additional Information for new CTE courses	
Transferability: Will this course transfer to another academic institution? Identify	OIT will accept this course
IMPACT ON OTHER PROGRAMS AND DEPARTMENTS	
Are there degrees and/or certificates that are affected by the instruction of this course? If so, provide details.	No
Are there similar courses existing in other programs or disciplines at CGCC? If yes, provide details and/or describe the nature of acknowledgments and/or agreements that have been reached.	Yes, CS 161, Programming and Problem Solving in the Computer Science program. CS 161 is a broader course emphasizing concepts fundamental for many programming languages. CS 170 is focused on industry-relevant C programming and will be a project-based course.
Identify and consult with Department chairs who may be impacted by this course such as content overlap, course duplication, prerequisite, enrollment, etc.	
Explain and/or describe the nature of acknowledgments and/or agreements that have been reached.	
Is there any potential impact on another department?	☐ Yes ☒ No
If yes, explain and/or describe the nature of acknowledgments and/or agreements that have been reached	
Has the Library director been notified regarding the addition of this course and the need for any potential resources?	☒ Yes ☐ No
Implementation term:	☐ Next available term after approval ☒ Specific term AFTER next available: Summer 2018
Allow 3-4 months to complete the new course approval process before the course can be scheduled.	

Section # 4 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Stephen Shwiff	sshwiff@cgcc.edu	02-27-2018
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	02-27-2018

Columbia Gorge Community College

REVISION of AAS DEGREE REQUEST

Submitted by: Mary Kramer	Email: mkramer@cgcc.edu	Phone: 541-506-6033	Department: CTE

(Double click on check boxes to activate dialog box)

SECTION # 1 OVERVIEW			
Current Title:	Electro-Mechanical Technology	Proposed Title:	No change
Current Credits:	106	Proposed Credits:	98
Overview and rationale for proposed changes:	To meet the advancing workforce needs of industry and focus training to reduce credit and cost burden to students.		
List of specific changes being proposed which may include, addition or deletion of courses, title changes, credit changes, prerequisite changes, outcome changes, course changes etc. Use consistent words – Add, Remove, Increase, Decrease, Change	1. Delete MTH 95; Add MTH 105 2. Delete MEC 121 and 122; Add MEC 123 and MEC 124 3. Delete RET 101, RET 102, CG 209, PSY 101, and Physical Education Elective 4. Add CIS 170 5. Revise outcomes 6. Decrease overall credits from 106 to 98		
Is this a statewide degree?	☐ Yes ☒ No	If so, have the changes been approved by the consortium?	☐ Yes ☐ No
Are there any career pathway(s) or related certificates attached to this degree?	☒ Yes ☐ No	If yes, title of career pathway(s) or related certificate(s)	Electro-Mechanical Technology
Requested Implementation Term	Summer 2018		

SECTION # 2 REVISION AREAS		
Does the revision involve changing degree prerequisites?		☐ Yes ☒ No
CURRENT PREREQUISITES **(Required whether or not prerequisites are being changed.)**		
Course Number	Course Title or Placement level	Credits
MTH 65	Beginning Algebra II completed with a grade of "B" or better	4
PROPOSED PREREQUISITES **(No change, leave blank.)**		
Course Number	Course Title or Placement level	Credits
No change		
DEGREE OUTCOMES All degree outcomes will be reviewed by the committee regardless of whether or not outcomes have changed.		
Describe what students are intended to be able to do "out there" (in life roles: worker, family member, community citizen, global citizen, and life-long learner), as opposed to a classroom activity "in here"? Good outcomes statements will suggest context to indicate this "out there" and they will describe what students can DO with what they know. See writing learning outcomes on the curriculum website.		
Does the revision involve changing degree outcomes?		☒ Yes ☐ No
CURRENT DEGREE OUTCOMES (Required whether or not outcomes are being changed.)		
Students who complete this degree will be able to:		
1. Qualify for employment in the electro-mechanical field as technicians.		
2. Service/repair electro-mechanical systems and assist engineers with the design of electro-mechanical systems by applying knowledge of electrical, electronics, mechanical, control systems and hydraulic/pneumatic concepts.		
3. Communicate effectively both at the individual level and within team settings.		
4. Understand the impact of renewable energy within the context of sustainability and apply sustainability concepts to electro-mechanical practices.		
5. Apply ethical and professional practice within the field of electro-mechanical technology.		
6. Qualify for employment in the high tech field as electronic technicians.		

PROPOSED DEGREE OUTCOMES
Students who complete this degree will be able to:
1. Qualify for employment in the electro-mechanical field as technicians.
2. Service/repair electro-mechanical systems and assist engineers with the design of electro-mechanical systems by applying knowledge of electrical, electronics, mechanical, control systems and hydraulic/pneumatic concepts.
3. Apply basic operations management practices and principles in an advanced manufacturing environment.
4. Control computer-driven devices through programming in the C language.

SECTION # 3 COURSE BY COURSE COMPARISON

List all courses (current AND proposed) in the term by term order that is to be displayed in the catalog degree map. Include elective list below.

If you are adding a course, place it in the preferred term, identify such a course with (add) and bold the text in the line.
If you want to rearrange the order of courses within the term-by-term sequence, do so on this form.
If you are removing a course, identify the course with (remove) and bold the text.
If the course title is changed, identify the course with (title change) and bold the text.
If the course credits have changed, identify the course with (increase or decrease credit) and bold the text.
If you need more lines to accommodate the courses, right click and insert rows.

The information you provide on this form will be reflected in the CGCC catalog pages. Please ensure it is correct.

Current Degree Information			Proposed Degree Information		
Course Number	**Course Title**	**Credits**	**Course Number**	**Course Title**	**Credits**
Term 1			**Term 1**		
EET 111	DC Circuits	5	EET 111	DC Circuits Prerequisites: MTH 65 (B or better), WR 115 and RD 115 or higher; or equivalent placement test scores	5
MEC 121	**Mechanical Power 1 (DELETE)**	**5**	**MEC 123**	**Industrial Mechanics (ADD)** Prerequisites: RD 115, WR 115 and MTH 20 or equivalent placement test scores	**5**
SAF 188	Industrial Safety and OSHA 10	2	SAF 188	Industrial Safety and OSHA 10	2
MTH 95	**Intermediate Algebra (DELETE)**	**4**	WR 121	English Composition (moved from term 2)	4
RET 102	**Alternate Energy Resources (DELETE)**	**1**			

Term 2			**Term 2**		
EET 112	AC Circuits	5	EET 112	AC Circuits Prerequisite: EET 111	5
MEC 120	Hydraulics	5	MEC 120	**Fluid Power and Electrical Control of Fluid Power Systems (Title Change)** Prerequisite: MTH 65	5
RET 101	**Intro to Wind Turbine Operations (DELETE)**	**2**	**CS 170**	**Embedded Computing (ADD)** Prerequisite: MTH 65 (with B or better) or equiv. test scores	**3**
CG 209	**Job Finding Skills (DELETE)**	**1**	**MTH 105 or higher**	**Math in Society (ADD)** Prerequisites: MTH 65 or MTH 98 or equiv. test scores. Prerequisite/concurrent: WR 121	**4**
WR 121	English Composition (move to term 1)	4			
	Physical Education Elective (DELETE)	**1**			
Term 3			**Term 3**		
EET 113	AC Power	5	EET 113	AC Power – Prerequisites: EET 112 or dept appr	5
MEC 122	**Mechanical Power 2 (DELETE)**	**5**	**MEC 124**	**Mechatronic Systems in Advanced Manufacturing (ADD)**	**3**
EET 141	Motor Control	5	EET 141	Motor Control – Prerequisites: EET 112	5
PSY 101	**Psychology and Human Relations (DELETE)**	**4**			
Term 4			**Term 4**		
EET 251	Digital Electronics 1: Programmable Logic Devices	5	EET 251	Digital Electronics 1: Programmable Logic Devices – Prerequisites: EET 113	5
EET 221	Semiconductor Devices and Circuits	5	EET 221	Semiconductor Devices and Circuits Prerequisites: EET 113	5
	General Education Elective-Arts & Letters	4		General Education Elective – Arts & Letters Prerequisites: MTH 20 or equiv. test scores. Prerequisite/concurrent: WR 121.	4
	General Education Elective	4		General Education Elective Prerequisites: MTH 20 or equiv. test scores. Prerequisite/concurrent: WR 121.	4

Term 5			Term 5		
EET 252	Digital Electronics 2: Programmable Logic Devices	5	EET 252	Digital Electronics 2: Programmable Logic Devices – Prerequisites: EET 251	5
EET 222	Operational Amplifier Circuits	5	EET 222	Operational Amplifier Circuits Prerequisites: EET 221	5
EET 219	Programmable Logic Controllers	3	EET 219	Programmable Logic Controllers Prerequisites: EET 251	3
	General Education Computer Science, Mathematics or Science Elective (DELETE)	**4**		**General Education Elective: Social Science (ADD)** Prerequisites: MTH 20 or equiv. test scores. Prerequisite/concurrent: WR 121.	**4**
Term 6			**Term 6**		
EET 242	Microcontroller Systems	5	EET 242	Microcontroller Systems Prerequisites: EET 252, EET 222	5
EET 273	Electronic Control Systems	3	EET 273	Electronic Control Systems Prerequisites: EET 222	3
RET 223	Power Generation	5	RET 223	Power Generation Prerequisite: EET 222	5
UAS 101	Introduction to Unmanned Aircraft Systems	4	UAS 101	Introduction to Unmanned Aircraft Systems Prerequisites: MTH 65 or higher, WR 115, RD 115.	4
	Credit Total	**106**		**Credit Total**	**98**

ELECTIVE LIST

Include all electives. Identify elective changes by stating if the elective is to be added or deleted and bold the text.
If you need more lines to accommodate the courses, right click and insert rows.

Current Electives			Proposed Electives		
Course Number	**Course Title**	**Credits**	**Course Number**	**Course Title**	**Credits**
	Any Physical Education course (DELETE)				

SECTION #5 DEPARTMENT REVIEW		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Stephen Shwiff	sshwiff@cgcc.edu	02-27-2018
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	02-27-2018

Next steps:

1. Save the completed Degree Revision Request Form and submit as an e-mail attachment to curriculum@cgcc.cc.or.us.
2. Complete the Degree/Certificate Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. You will be notified of your submission's time for review. 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.

Columbia Gorge Community College

CERTIFICATE REVISION

Submitted by: Mary Kramer	Email: mkramer@cgcc.edu	Phone: 541-506-6033	Department: CTE

(Double click on check boxes to activate dialog box)

SECTION #1 OVERVIEW			
Current Title:	Electro-Mechanical Technology	Proposed Title:	No change
Current Credits:	54	Proposed Credits:	42
Overview and rationale for proposed changes:	To meet the advancing workforce needs of industry and focus training to reduce credit and cost burden to students.		
List of specific changes being proposed which may include, addition or deletion of courses, title changes, credit changes, prerequisite changes, outcome changes, course changes etc. Use consistent words – Add, Remove, Increase, Decrease, Change	1. Delete MTH 95 2. Delete MEC 121 and 122; Add MEC 123 and MEC 124 3. Delete RET 101, RET 102, CG 209, PSY 101, and Physical Education Elective 4. Add CIS 170 5. Revised outcomes 6. Decrease overall credits from 54 to 42 7. Remove related instruction requirement		
Is this a Related Certificate?	☒ Yes ☐ No	Is this a Career Pathway?	☐ Yes ☒ No
If yes, what is the base degree?	Electro-Mechanical Technology AAS		
Will the proposed changes affect the base degree or certificate?			☒ Yes ☐ No
If yes, how?	These revisions will apply to the first year of the AAS degree.		

Is this a statewide certificate?	☐ Yes ☒ No	If yes, have the changes been approved by the consortium?	☐ Yes ☐ No
Requested Implementation Term	Summer 2018		

SECTION #2 REVISION AREAS			
Does the revision involve changing certificate prerequisites?			☐ Yes ☒ No
CURRENT PREREQUISITES **(Required whether or not prerequisites are being changed.)**			
Course Number	Course Title or Placement level	Requisites (if any)	Credits
MTH 65	Beginning Algebra (completed with a grade of "B" or better)	Prerequisites: MTH 60 or equiv test scores	4
PROPOSED PREREQUISITES **(No change, leave blank.)**			
Course Number	Course Title or Placement level	Requisites (if any)	Credits
No changes			
CERTIFICATE OUTCOMES All certificate outcomes will be reviewed by the committee regardless of whether or not outcomes have changed.			
Describe what students are intended to be able to do "out there" (in life roles: worker, family member, community citizen, global citizen, and life-long learner), as opposed to a classroom activity "in here"? Good outcomes statements will suggest context to indicate this "out there" and they will describe what students can DO with what they know. See writing learning outcomes on the curriculum website.			
Does the revision involve changing certificate outcomes?			☒ Yes ☐ No
CURRENT CERTIFICATE OUTCOMES (Required whether or not outcomes are being changed.)			
Students who complete this certificate will be able to:			
1. Qualify for employment in the renewable energy field as entry level operators.			
2. Assist technicians with repair, servicing, and manufacturing of renewable energy systems by applying basic knowledge of mathematic, electrical, electronic, mechanical, and hydraulic/pneumatic concepts.			
3. Communicate effectively both at the individual level and within team settings.			
4. Understand the impact of renewable energy within the context of sustainability and apply sustainability concepts to their practice.			

5. Apply ethical and professional practice within the field of renewable energy.
6. Qualify for employment in the high tech field as electronics technicians.
PROPOSED CERTIFICATE OUTCOMES
Students who complete this certificate will be able to:
1. Qualify for employment in the electro-mechanical field as entry level operators.
2. Assist technicians with repair, servicing, and manufacturing of electro-mechanical systems by applying basic knowledge of mathematic, electrical, electronic, mechanical, and hydraulic/pneumatic concepts.
3. Communicate effectively both at the individual level and within team settings.
4. Qualify for employment in the high tech field as electronics technicians.
RELATED INSTRUCTION

Does the revision involve changing or adding Related Instruction?	☒ Yes	☐ No
If yes, complete the Related Instruction Template which may be found on the curriculum website.		
Additional Comments Or Changes		
Related instruction no longer applies to this certificate at 42 credits.		

SECTION #3 COURSE BY COURSE COMPARISON

List all courses (current AND proposed) in the term by term order that is to be displayed in the catalog certificate map. Include elective list below.

If you are adding a course, place it in the preferred term, identify such a course with (add) and bold the text in the line.
If you want to rearrange the order of courses within the term-by-term sequence, do so on this form.
If you are removing a course, identify the course with (remove) and bold the text.
If the course title is changed, identify the course with (title change) and bold the text.
If the course credits have changed, identify the course with (increase or decrease credit) and bold the text.
If you need more lines to accommodate the courses, right click and insert rows.

The information you provide on this form will be reflected in the CGCC catalog pages. Please ensure it is correct.

Current Certificate Information			**Proposed Certificate Information**		
Course Number	**Course Title / Requisites**	**Credits**	**Course Number**	**Course Title / Requisites**	**Credits**
Term 1			**Term 1**		
EET 111	DC Circuits	5	EET 111	DC Circuits Prerequisites: MTH 65 (B or better), WR 115 and RD 115 or higher; or equivalent placement test scores	5

MEC 121	**Mechanical Power 1 (DELETE)**	**5**	**MEC 123**	**Industrial Mechanics (ADD)** Prerequisites: RD 115, WR 115 and MTH 20 or equivalent placement test scores	**5**
SAF 188	Industrial Safety and OSHA 10	2	SAF 188	Industrial Safety and OSHA 10	2
MTH 95	**Intermediate Algebra (DELETE)**	**4**	WR 121	English Composition (moved from term 2)	4
RET 102	**Alternate Energy Resources (DELETE)**	**1**			
Term 2			**Term 2**		
EET 112	AC Circuits	5	EET 112	AC Circuits Prerequisite: EET 111	5
MEC 120	Hydraulics	5	MEC 120	**Fluid Power and Electrical Control of Fluid Power Systems (Title Change)** Prerequisite: MTH 65	5
CG 209	**Job Finding Skills (DELETE)**	**1**	**CS 170**	**Embedded Computing (ADD)** Prerequisite: MTH 65 (with B or better) or equiv. test scores	**3**
	Physical Education Elective (DELETE)	**1**			
RET 101	**Intro to Wind Turbine Operations (DELETE)**	**2**			
WR 121	English Composition (moved to term 1)	4			
Term 3			**Term 3**		
EET 113	AC Power	5	EET 113	AC Power – Prerequisite: EET 112 or dep appr	5
EET 141	Motor Control	5	EET 141	Motor Control – Prerequisites: EET 112	5
MEC 122	**Mechanical Power 2 (DELETE)**	**5**	**MEC 124**	**Mechatronic Systems in Advanced Manufacturing (ADD)**	**3**
PSY 101	**Psychology and Human Relations (DELETE)**	**4**			
	Credit total	**54**		**Credit total**	**42**

ELECTIVE LIST

Include all electives. Identify elective changes by stating if the elective is to be added or deleted and bold the text.
If you need more lines to accommodate the courses, right click and insert rows.

Current Electives			**Proposed Electives**		
Course Number	**Course Title / Requisites**	**Credits**	**Course Number**	**Course Title / Requisites**	**Credits**
	Any Physical Education course (DELETE)				

Section #4 DEPARTMENT REVIEW		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Stephen Shwiff	sshwiff@cgcc.edu	02-27-2018
Department Director	Email	
Mary Kramer	mkramer@cgcc.edu	02-27-2018

Next steps:

1. Save the completed Certificate Revision Request Form and submit as an e-mail attachment to curriculum@cgcc.cc.or.us.
2. If needed, attach the completed Related Instruction Template to the same e-mail.
3. Complete the Degree/Certificate Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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.
4. Submissions will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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 _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	BI 211	Course Title:	Principles of Biology
Course Credits:	5	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Includes introduction to science, biochemistry, metabolism, the cell, molecular biology, and reproduction. Includes inheritance, the genetic code, modern and classical genetics. The first course of a three-course sequence for students majoring in biology and the sciences, including pre-medical, pre-dental, chiropractic, pharmacy, and related fields. Recommended: High school biology and chemistry within the past seven years. Prerequisites: MTH 95 or higher or equivalent placement test scores. Prerequisite/concurrent: WR 121; CH 100 or higher, or instructor permission. Audit available.		
Course Outcomes:	1. Apply biological theories and concepts from biochemistry and cell biology to novel problems in their lives and community (personal, work, and career). 2. Use the scientific method, including experimental design, data collection, and presentations of results and conclusions while analyzing their individual thinking and learning styles and how their styles can be integrated with methods used in science. 3. Assess the strengths and weaknesses of scientific studies in biochemistry and cell biology and critically examine the influence of scientific and technical knowledge of biochemistry and cell biology on human society and the environment. 4. Develop informed positions and opinions on contemporary issues in biochemistry and cell biology, while considering ethical, scientific, community, and cultural implications. 5. Communicate concepts in genetics, biochemistry and cell biology using appropriate terminology in both written and verbal forms. 6. Competently enter and complete further work in the sciences, including Biology 212 and upper level courses in biochemistry and cell biology.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**

5. Be an LDC course that is eligible for the AAOT Discipline Studies List.

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	Outcomes: 4. Develop informed positions and opinions on contemporary issues in biochemistry and cell biology, while considering ethical, scientific, community, and cultural implications. 5. Communicate concepts in genetics, biochemistry and cell biology using appropriate terminology in both written and verbal forms. CLO is addressed though lecture and lab assignments (including class presentations), quizzes and/or lecture exams.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	Outcomes: 1. Apply biological theories and concepts from biochemistry and cell biology to novel problems in their lives and community (personal, work, and career). 2. Use the scientific method, including experimental design, data collection, and presentations of results and conclusions while analyzing their individual thinking and learning styles and how their styles can be integrated with methods used in science. The CLO is addressed though some/all of the following: Lecture or lab assignments/quizzes/exams, class presentations, class projects requiring relevant data and appropriate format(s).

Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 2. Use the scientific method, including experimental design, data collection, and presentations of results and conclusions while analyzing their individual thinking and learning styles and how their styles can be integrated with methods used in science. 3. Assess the strengths and weaknesses of scientific studies in biochemistry and cell biology and critically examine the influence of scientific and technical knowledge of biochemistry and cell biology on human society and the environment. The CLO is addressed though some/all of the following: Lecture or lab assignments/quizzes/exams, class presentations, class projects requiring relevant data and appropriate format(s).
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☒ minimally ☐ not addressed significantly	Outcome: 1. Apply biological theories and concepts from biochemistry and cell biology to novel problems in their lives and community (personal, work, and career). The CLO is addressed through quiz, exam, and/or class projects (lecture or lab).

3. Address the AAOT Discipline Studies Outcomes and Criteria:

Complete only the questions regarding outcomes and criteria for the category to which your course belongs - Art and Letters; Social Sciences; Science and Computer Science; or Mathematics.

Science or Computer Science

Outcomes:

As a result of taking General Education Science or Computer Science courses, a student should be able to:

- Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions;
- Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
- Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Criteria:	
A General Education course in either Science or Computer Science should: 1. Analyze the development, scope, and limitations of fundamental scientific concepts, models, theories, and methods. 2. Engage students in problem-solving and investigation, through the application of scientific and mathematical methods and concepts, and by using evidence to create and test models and draw conclusions. The goal should be to develop analytical thinking that includes evaluation, synthesis, and creative insight. 3. Examine relationships with other subject areas, including the ethical application of science in human society and the relevance of science to everyday life. In addition: 4a. A General Education course in Science should engage students in collaborative, hands-on and/or real-life activities that develop scientific reasoning and the capacity to apply mathematics and that allow students to experience the exhilaration of discovery. 4b. A General Education course in Computer Science should engage students in the design of algorithms and computer programs that solve problems.	
List the course outcome(s) from the course's CCOG that clearly reflect the above outcomes and criteria.*	1. Apply biological theories and concepts from biochemistry and cell biology to novel problems in their lives and community (personal, work, and career). 2. Use the scientific method, including experimental design, data collection, and presentations of results and conclusions while analyzing their individual thinking and learning styles and how their styles can be integrated with methods used in science. 3. Assess the strengths and weaknesses of scientific studies in biochemistry and cell biology and critically examine the influence of scientific and technical knowledge of biochemistry and cell biology on human society and the environment. 4. Develop informed positions and opinions on contemporary issues in biochemistry and cell biology, while considering ethical, scientific, community, and cultural implications.
***Note:** It must be clearly evident that the above outcomes are addressed within the course's outcomes. Between your answers to the three outcomes questions below, you need to address all of the first three criteria as well as the appropriate fourth criterion.	
How does the course enable a student to "gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions"?	Skills are developed and applied through satisfactory completion of laboratory and/or lecture assignments/exams in which students review, organize and present course content.
How does the course enable a student to "apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve	Skills are developed and applied through satisfactory completion of laboratory and/or assignments in which students working individually and collectively review and process (includes discussing/debating) data.

problems, and make evidence-based decisions in an ethical manner"?	
How does the course enable a student to "assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment"?	Skills are developed and applied through satisfactory completion of one or more assignments (lecture or lab) which may include a research topic (literature review) related to course and requiring an analytical approach and accepted format.

Section # 4 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/26/18
Department Director	Email	Date
Mary Kramer	Mkramer @cgcc.edu	2/26/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Principles of Biology

Course Number: BI 211
Transcript Title: Principles of Biology
Created: September 1, 2013
Updated: December 5, 2016
Total Credits: 5
Lecture Hours: 40
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 95 (/courses/mth-95) or higher or equivalent placement test scores

Prerequisite / Concurrent
WR 121 (/courses/wr-121)
CH 100 (/courses/ch-100) or higher; or instructor permission

Course Description

Includes introduction to science, biochemistry, metabolism, the cell, molecular biology, and reproduction. Includes inheritance, the genetic code, modern and classical genetics. The first course of a three-course sequence for students majoring in biology and the sciences, including pre-medical, pre-dental, chiropractic, pharmacy, and related fields. Recommended: High school biology and chemistry within the past seven years. Prerequisites: MTH 95 or higher or equivalent placement test scores. Prerequisite/concurrent: WR 121; CH 100 or higher, or instructor permission. Audit available.

Intended Outcomes

Students will be able to:

1. Apply biological theories and concepts from biochemistry and cell biology to novel problems in their lives and community (personal, work, and career).
2. Use the scientific method, including experimental design, data collection, and presentations of results and conclusions while analyzing their individual thinking and learning styles and how their styles can be integrated with methods used in science.
3. Assess the strengths and weaknesses of scientific studies in biochemistry and cell biology and critically examine the influence of scientific and technical knowledge of biochemistry and cell biology on human society and the environment.
4. Develop informed positions and opinions on contemporary issues in biochemistry and cell biology, while considering ethical, scientific, community, and cultural implications.
5. Communicate concepts in genetics, biochemistry and cell biology using appropriate terminology in both written and verbal forms.
6. Competently enter and complete further work in the sciences, including Biology 212 and upper level courses in biochemistry and cell biology.

Alignment with Institutional Core Learning Outcomes

1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*

3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*

4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*

5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

- Open-ended essay questions and multiple-choice exams
- Scientific papers that follow standard scientific format presenting independent investigations and may include peer-review(s)
- Oral presentations of biological information, informed positions on contemporary issues, and/or laboratory results
- Classroom assessments, such as, quizzes, one minute summaries, pre-test/post-tests, etc.
- Major independent projects, such as, experiential learning plus journals, botany collections with ecosystem reports, library research term papers, and field journals.
- Scientific article critiques
- Laboratory practical exams
- Small projects and homework assignments.

Course Activities and Design

This course will be taught in a traditional lecture and laboratory format. Lecture will be presented utilizing a variety of multimedia and interactive presentations. Laboratory experiences will be largely hands-on and team-based, utilizing a variety of resources including (but not limited to): multimedia, prepared microscope slides, plant, human and animal specimens.

Course Content (Themes, Concepts, Issues and Skills)

Themes and Concepts include:

1. The properties of living things
2. Basic chemistry
3. How properties of water affect living things
4. Basic organic chemistry
5. Functional characteristics of organic macromolecules
6. Biochemical pathways and enzymes
7. Cell microanatomy
8. Membrane structure and function
9. Aerobic and anaerobic cellular respiration
10. Photosynthesis
11. Binary fission and mitosis
12. Meiosis and sexual life cycles
13. Introduction to genetics including Mendelian genetics
14. Genetics of viruses and bacterial (optional)
15. Gene expression in eukaryotes (optional)
16. DNA technology (optional)

Issues:

Biology 211 is relevant to many contemporary issues that may be discussed and explored during the course, such as, effects of pollution in aquatic systems, applications of gene therapy, dwindling biodiversity, global warming, acid rain, overpopulation, unknown impacts of genetically modified organisms, etc.

Competencies and Skills:

- Read scientific literature
- Apply the scientific method
- Use laboratory techniques and equipment
- Locate and access biological information
- Think critically
- Collaborate with peers -- work effectively in groups
- Articulate scientific processes in written and oral format
- Present data in papers using the scientific format
- Present conclusions logically

Department Notes

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised through observation and experimentation. “Creation science", “Intelligent design” or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College, therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	BI 212	Course Title:	Principles of Biology
Course Credits:	5	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Includes modern and classical genetics, evolution, diversity, and systematics. May include some dissection of plants and animals. The second course in a three course sequence for students majoring in biology and the sciences, including pre-medical, pre-dental, chiropractic, pharmacy, and related fields. Prerequisite: BI 211 and its prerequisite requirements. Audit available.		
Course Outcomes:	Students will be able to: 1. Apply biological theories and concepts to novel problems in genetics, evolution, and systematics. 2. Assess the strengths and weaknesses of scientific studies in genetics, evolution, and systematics and critically examine the influence of scientific and technical knowledge of genetics, evolution, and systematics on human society and the environment. 3. Apply concepts from genetics, evolution, and systematics to their lives and community (personal, work, and career). 4. Develop informed positions and opinions on contemporary issues in genetics, evolution, and systematics, while considering ethical, scientific, community, and cultural implications. 5. Communicate concepts in genetics, evolution, and systematics using appropriate terminology in both written and verbal forms. 6. Competently enter and complete further work in the sciences, including Biology 213 and upper level courses in genetics, evolution, and systematics.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	Outcomes: 4. Develop informed positions and opinions on contemporary issues in genetics, evolution, and systematics, while considering ethical, scientific, community, and cultural implications. 5. Communicate concepts in genetics, evolution, and systematics using appropriate terminology in both written and verbal forms. CLO is addressed though lecture and lab assignments (including class presentations), quizzes and/or lecture exams.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	Outcomes: 1. Apply biological theories and concepts to novel problems in genetics, evolution, and systematics. 2. Assess the strengths and weaknesses of scientific studies in genetics, evolution, and systematics and critically examine the influence of scientific and technical knowledge of genetics, evolution, and systematics on human society and the environment. 3. Apply concepts from genetics, evolution, and systematics to their lives and community (personal, work, and career). The CLO is addressed though some/all of the following: Lecture or lab assignments/quizzes/exams, class presentations, class projects requiring relevant data and appropriate format(s).

Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 1. Apply biological theories and concepts to novel problems in genetics, evolution, and systematics. 2. Assess the strengths and weaknesses of scientific studies in genetics, evolution, and systematics and critically examine the influence of scientific and technical knowledge of genetics, evolution, and systematics on human society and the environment. 3. Apply concepts from genetics, evolution, and systematics to their lives and community (personal, work, and career). The CLO is addressed though some/all of the following: Lecture or lab assignments/quizzes/exams, class presentations, class projects requiring relevant data and appropriate format(s).
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☒ minimally ☐ not addressed significantly	Outcomes: 2. Assess the strengths and weaknesses of scientific studies in genetics, evolution, and systematics and critically examine the influence of scientific and technical knowledge of genetics, evolution, and systematics on human society and the environment. 3. Apply concepts from genetics, evolution, and systematics to their lives and community (personal, work, and career).

3. Address the AAOT Discipline Studies Outcomes and Criteria:

Complete only the questions regarding outcomes and criteria for the category to which your course belongs - Art and Letters; Social Sciences; Science and Computer Science; or Mathematics.

Science or Computer Science

Outcomes:

As a result of taking General Education Science or Computer Science courses, a student should be able to:

- Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions;
- Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
- Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Criteria:	
A General Education course in either Science or Computer Science should: 1. Analyze the development, scope, and limitations of fundamental scientific concepts, models, theories, and methods. 2. Engage students in problem-solving and investigation, through the application of scientific and mathematical methods and concepts, and by using evidence to create and test models and draw conclusions. The goal should be to develop analytical thinking that includes evaluation, synthesis, and creative insight. 3. Examine relationships with other subject areas, including the ethical application of science in human society and the relevance of science to everyday life. In addition: 4a. A General Education course in Science should engage students in collaborative, hands-on and/or real-life activities that develop scientific reasoning and the capacity to apply mathematics and that allow students to experience the exhilaration of discovery. 4b. A General Education course in Computer Science should engage students in the design of algorithms and computer programs that solve problems.	
List the course outcome(s) from the course's CCOG that clearly reflect the above outcomes and criteria.*	
***Note:** It must be clearly evident that the above outcomes are addressed within the course's outcomes. Between your answers to the three outcomes questions below, you need to address all of the first three criteria as well as the appropriate fourth criterion.	
How does the course enable a student to "gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions"?	Skills are developed and applied through satisfactory completion of laboratory and/or lecture assignments/exams in which students review, organize and present course content.
How does the course enable a student to "apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner"?	Skills are developed and applied through satisfactory completion of laboratory and/or assignments in which students working individually and collectively review and process (includes discussing/debating) data.
How does the course enable a student to "assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment"?	Skills are developed and applied through satisfactory completion of one or more assignments (lecture or lab) which may include a research topic (literature review) related to course and requiring an analytical approach and accepted format.

Section # 4 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/28/18
Department Director	Email	Date
Mary Kramer	Mkramer@cgcc.edu	2/28/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Principles of Biology

Course Number: BI 212
Transcript Title: Principles of Biology
Created: September 1, 2013
Updated: December 5, 2016
Total Credits: 5
Lecture Hours: 40
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
BI 211 (/courses/bi-211) and its prerequisite requirements

Course Description

Includes modern and classical genetics, evolution, diversity, and systematics. May include some dissection of plants and animals. The second course in a three course sequence for students majoring in biology and the sciences, including pre-medical, pre-dental, chiropractic, pharmacy, and related fields. Prerequisite: BI 211 and its prerequisite requirements. Audit available.

Intended Outcomes

Students will be able to:

1. Apply biological theories and concepts to novel problems in genetics, evolution, and systematics.
2. Assess the strengths and weaknesses of scientific studies in genetics, evolution, and systematics and critically examine the influence of scientific and technical knowledge of genetics, evolution, and systematics on human society and the environment.
3. Apply concepts from genetics, evolution, and systematics to their lives and community (personal, work, and career).
4. Develop informed positions and opinions on contemporary issues in genetics, evolution, and systematics, while considering ethical, scientific, community, and cultural implications.
5. Communicate concepts in genetics, evolution, and systematics using appropriate terminology in both written and verbal forms.
6. Competently enter and complete further work in the sciences, including Biology 213 and upper level courses in genetics, evolution, and systematics.

Alignment with Institutional Core Learning Outcomes

1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*

3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*

4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*

5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

- Open-ended essay questions and multiple-choice exams.

- Scientific papers that follow standard scientific format presenting independent investigations and may include peer-review(s).
- Oral presentations of biological information, informed positions on contemporary issues, and/or laboratory results.
- Classroom assessments, such as, quizzes, one minute summaries, pre-test/post-tests, etc.
- Major independent projects, such as, experiential learning plus journals, botany collections with ecosystem reports, library research term papers, and field journals.
- Scientific article critiques.
- Laboratory practical exams.
- Small projects and homework assignments.

Course Activities and Design

This course will be taught in a traditional lecture and laboratory format. Lecture will be presented utilizing a variety of multimedia and interactive presentations. Laboratory experiences will be largely hands-on and team-based, utilizing a variety of resources including (but not limited to): multimedia, prepared microscope slides, plant, human and animal specimens.

Course Content (Themes, Concepts, Issues and Skills)

Themes and Concepts include:

1. Introduction to genetics including Mendelian genetics
2. The chromosomal basis of inheritance
3. The molecular basis of inheritance
4. The transcription and translation of genes
5. Evolution by natural selection
6. Population genetics and microevolution
7. Speciation
8. Macroevolution and phylogenetic reconstruction
9. Early Earth and the origin of life
10. Survey of biodiversity: prokaryotes
11. Survey of biodiversity: origins of eukaryotic diversity
12. Survey of biodiversity: plants colonize land
13. Survey of biodiversity: evolutionary significance of fungi
14. Survey of biodiversity: invertebrate animals and the origin of animal diversity
15. Survey of biodiversity: vertebrate phylogeny
16. Genetics of viruses and bacteria (optional)
17. Gene expression in eukaryotes (optional)
18. DNA Technology (optional)

Issues:

Biology 212 is relevant to many contemporary issues that may be discussed and explored during the course, such as, effects of pollution in aquatic systems, applications of gene therapy, dwindling biodiversity, primate evolution, global warming, acid rain, overpopulation, unknown impacts of genetically modified organisms, etc.

Competencies and Skills:

- Read scientific literature
- Apply the scientific method
- Use laboratory techniques and equipment
- Locate and access biological information
- Think critically
- Collaborate with peers -- work effectively in groups
- Articulate scientific processes in written and oral format
- Present data in papers using the scientific format
- Present conclusions logically

Department Notes

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

> Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised through observation and experimentation. “Creation science", “Intelligent design” or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College, therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	BI 213	Course Title:	Principles of Biology
Course Credits:	5	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Includes plant and animal anatomy and physiology, and individual, population, community and ecosystem ecology. The third course of a three-course sequence for students majoring in biology and the sciences, including pre-medical, pre-dental, chiropractic, pharmacy, and related fields. Prerequisite: BI 212 and its prerequisite requirements. Audit available.		
Course Outcomes:	Upon successful completion students will be able to: 1. Apply biological theories and concepts to novel problems in plant/animal anatomy and physiology and ecology. 2. Assess the strengths and weaknesses of scientific studies in plant/animal anatomy and physiology and ecology and critically examine the influence of scientific and technical knowledge of plant/animal anatomy and physiology and ecology on human society and the environment. 3. Apply concepts from plant/animal anatomy and physiology and ecology to their lives and community (personal, work, and career). 4. Develop informed positions and opinions on contemporary issues in plant/animal anatomy and physiology and ecology, while considering ethical, scientific, community, and cultural implications. 5. Communicate concepts in plant/animal anatomy and physiology and ecology using appropriate terminology in both written and verbal forms. 6. Competently enter and complete further work in the sciences upper-level courses in plant/animal anatomy and physiology and ecology.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	Outcomes: 4. Develop informed positions and opinions on contemporary issues in plant/animal anatomy and physiology and ecology, while considering ethical, scientific, community, and cultural implications. 5. Communicate concepts in plant/animal anatomy and physiology and ecology using appropriate terminology in both written and verbal forms. CLO is addressed though lecture and lab assignments (including class presentations), quizzes and/or lecture exams.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	Outcomes: 1. Apply biological theories and concepts to novel problems in plant/animal anatomy and physiology and ecology. 2. Assess the strengths and weaknesses of scientific studies in plant/animal anatomy and physiology and ecology and critically examine the influence of scientific and technical knowledge of plant/animal anatomy and physiology and ecology on human society and the environment. 3. Apply concepts from plant/animal anatomy and physiology and ecology to their lives and community (personal, work, and career). The CLO is addressed though some/all of the following: Lecture or lab assignments/quizzes/exams, class presentations, class projects requiring relevant data and appropriate format(s).

Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 1. Apply biological theories and concepts to novel problems in plant/animal anatomy and physiology and ecology. 2. Assess the strengths and weaknesses of scientific studies in plant/animal anatomy and physiology and ecology and critically examine the influence of scientific and technical knowledge of plant/animal anatomy and physiology and ecology on human society and the environment. 3. Apply concepts from plant/animal anatomy and physiology and ecology to their lives and community (personal, work, and career). The CLO is addressed though some/all of the following: Lecture or lab assignments/quizzes/exams, class presentations, class projects requiring relevant data and appropriate format(s).
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 2. Assess the strengths and weaknesses of scientific studies in plant/animal anatomy and physiology and ecology and critically examine the influence of scientific and technical knowledge of plant/animal anatomy and physiology and ecology on human society and the environment. 3. Apply concepts from plant/animal anatomy and physiology and ecology to their lives and community (personal, work, and career). 4. Develop informed positions and opinions on contemporary issues in plant/animal anatomy and physiology and ecology, while considering ethical, scientific, community, and cultural implications. The CLO is addressed through quiz, exam, and/or class projects (lecture or lab).

3. Address the AAOT Discipline Studies Outcomes and Criteria:

Complete only the questions regarding outcomes and criteria for the category to which your course belongs - Art and Letters; Social Sciences; Science and Computer Science; or Mathematics.

Science or Computer Science

Outcomes:

As a result of taking General Education Science or Computer Science courses, a student should be able to:

- Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions;
- Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
- Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Criteria:	
A General Education course in either Science or Computer Science should: 1. Analyze the development, scope, and limitations of fundamental scientific concepts, models, theories, and methods. 2. Engage students in problem-solving and investigation, through the application of scientific and mathematical methods and concepts, and by using evidence to create and test models and draw conclusions. The goal should be to develop analytical thinking that includes evaluation, synthesis, and creative insight. 3. Examine relationships with other subject areas, including the ethical application of science in human society and the relevance of science to everyday life. In addition: 4a. A General Education course in Science should engage students in collaborative, hands-on and/or real-life activities that develop scientific reasoning and the capacity to apply mathematics and that allow students to experience the exhilaration of discovery. 4b. A General Education course in Computer Science should engage students in the design of algorithms and computer programs that solve problems.	
List the course outcome(s) from the course's CCOG that clearly reflect the above outcomes and criteria.*	
***Note:** It must be clearly evident that the above outcomes are addressed within the course's outcomes. Between your answers to the three outcomes questions below, you need to address all of the first three criteria as well as the appropriate fourth criterion.	
How does the course enable a student to "gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions"?	Skills are developed and applied through satisfactory completion of laboratory and/or lecture assignments/exams in which students review, organize and present course content.
How does the course enable a student to "apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner"?	Skills are developed and applied through satisfactory completion of laboratory and/or assignments in which students working individually and collectively review and process (includes discussing/debating) data.
How does the course enable a student to "assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment"?	Skills are developed and applied through satisfactory completion of one or more assignments (lecture or lab) which may include a research topic (literature review) related to course and requiring an analytical approach and accepted format.

Section # 4 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/28/18
Department Director	Email	Date
Mary Kramer	Mkramer@cgcc.edu	2/28/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Principles of Biology

Course Number: BI 213
Transcript Title: Principles of Biology
Created: September 1, 2013
Updated: January 22, 2016
Total Credits: 5
Lecture Hours: 40
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
BI 212 (/courses/bi-212) and its prerequisite requirements

Course Description

Includes plant and animal anatomy and physiology, and individual, population, community and ecosystem ecology. The third course of a three-course sequence for students majoring in biology and the sciences, including pre-medical, pre-dental, chiropractic, pharmacy, and related fields. Prerequisite: BI 212 and its prerequisite requirements. Audit available.

Intended Outcomes

Upon successful completion students will be able to:

1. Apply biological theories and concepts to novel problems in plant/animal anatomy and physiology and ecology.
2. Assess the strengths and weaknesses of scientific studies in plant/animal anatomy and physiology and ecology and critically examine the influence of scientific and technical knowledge of plant/animal anatomy and physiology and ecology on human society and the environment.
3. Apply concepts from plant/animal anatomy and physiology and ecology to their lives and community (personal, work, and career).
4. Develop informed positions and opinions on contemporary issues in plant/animal anatomy and physiology and ecology, while considering ethical, scientific, community, and cultural implications.
5. Communicate concepts in plant/animal anatomy and physiology and ecology using appropriate terminology in both written and verbal forms.
6. Competently enter and complete further work in the sciences upper-level courses in plant/animal anatomy and physiology and ecology.

Alignment with Institutional Core Learning Outcomes

1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*

3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*

4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*

5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

- Open-ended essay questions and multiple-choice exams.

- Scientific papers that follow standard scientific format presenting independent investigations and may include peer-review(s).
- Oral presentations of biological information, informed positions on contemporary issues, and/or laboratory results.
- Classroom assessments, such as, quizzes, one minute summaries, pre-test/post-tests, etc.
- Major independent projects, such as, experiential learning plus journals, botany collections with ecosystem reports, library research term papers, and field journals.
- Scientific article critiques.
- Laboratory practical exams.
- Small projects and homework assignments.

Course Activities and Design

This course will be taught in a traditional lecture and laboratory format. Lecture will be presented utilizing a variety of multimedia and interactive presentations. Laboratory experiences will be largely hands-on and team-based, utilizing a variety of resources including (but not limited to): multimedia, prepared microscope slides, plant, human and animal specimens.

Course Content (Themes, Concepts, Issues and Skills)

Themes and Concepts include:

1. Plant anatomy and morphology
2. Transport in plants
3. Plant nutrition
4. Plant reproduction and development
5. Plant growth, development, and responses to environmental stimuli
6. Animal tissues and body plans
7. Animal nutrition
8. Animal circulation and gas exchange
9. Animal immune systems (optional)
10. Homeostasis in animals
11. Chemical signals in animals
12. Animal reproduction (optional)
13. Animal development (optional)
14. Animal nervous systems
15. Animal sensory and motor systems
16. The distribution and adaptations of organisms
17. Population ecology
18. Community ecology
19. Ecosystem ecology

Issues:

Biology 213 is relevant to many contemporary issues that may be discussed and explored during the course, such as, effects of pollution in aquatic systems, dwindling biodiversity, global warming, acid rain, overpopulation, habitat destruction and fragmentation, effects of invasive non-native plants, etc.

Competencies and Skills:

- Read scientific literature
- Apply the scientific method
- Use laboratory techniques and equipment
- Locate and access biological information
- Think critically
- Collaborate with peers -- work effectively in groups
- Articulate scientific processes in written and oral format
- Present data in papers using the scientific format
- Present conclusions logically

Department Notes

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

> Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised

through observation and experimentation. “Creation science", “Intelligent design” or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College, therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	CH 100	Course Title:	Everyday Chemistry with Lab
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Introduces chemistry related topics pertaining to everyday life. Includes topics such as renewable energy, clean air and water and global climate change using a relatively nonmathematical approach. Includes atomic/molecular structure, the periodic table, chemical bonding, intermolecular forces, chemical reactions, acids/bases and the social and environmental role of chemistry. Recommended for non-science majors to fulfill the Gen Ed science with lab requirement. Prerequisite: WR 115, RD 115 and MTH 20 or equivalent placement test scores. Audit available.		
Course Outcomes:	1. Observe the natural world with an understanding of the particulate nature of matter. 2. Distinguish between opinion, philosophy, and empirical evidence for phenomena using knowledge of the process of scientific inquiry. 3. Apply critical thinking skills to make evidence based decisions on issues that affect the environment and the community. 4. Communicate basic chemistry concepts effectively orally and in writing.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome #4: Communicate basic chemistry concepts effectively orally and in writing. Students will write two papers on directed topics in chemistry. Students will write up to twelve laboratory reports of which must be coordinated with fellow students involved in their laboratory group. Students are regularly required to discuss topics in the classroom and laboratory environments. Students are required to ask and answer questions twice a week in our online LMS, Moodle.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome #3: Apply critical thinking skills to make evidence based decisions on issues that affect the environment and the community. After ever class students are required to complete a homework assignment in which they must problem solve. Every week students are required to participate in a hands on laboratory experiment that forces problem solving skills to be utilized. Every week students are required to ask a question that they have reflected as personally troubling to solve.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☐ in-depth ☒ minimally ☐ not addressed significantly	Outcomes: 4. Distinguish between opinion, philosophy, and empirical evidence for phenomena using knowledge of the process of scientific inquiry. 5. Communicate basic chemistry concepts effectively orally and in writing. Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments

	2. Applications of laboratory experiences 3. Quizzes 4. Examinations
6. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	☒ no changes ☐ revised
7. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcome #1: Observe the natural world with an understanding of the particulate nature of matter. Outcome #3: Apply critical thinking skills to make evidence based decisions on issues that affect the environment and the community. In every class we discuss how humans impact each other and the planet through the use of chemistry and chemistry related technologies. A first day of class discussion centers on the need for knowledgeable citizens in this democratic society.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Everyday Chemistry with Lab

Course Number: CH 100
Transcript Title: Everyday Chemistry with Lab
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 20 (/courses/mth-20) or equivalent placement test scores. Prerequisite/concurrent: WR 121 (/courses/wr-121).

Course Description

Introduces chemistry related topics pertaining to everyday life. Includes topics such as renewable energy, clean air and water and global climate change using a relatively nonmathematical approach. Includes atomic/molecular structure, the periodic table, chemical bonding, intermolecular forces, chemical reactions, acids/bases and the social and environmental role of chemistry. Recommended for non-science majors to fulfill the Gen Ed science with lab requirement. Prerequisites: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

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

1. Observe the natural world with an understanding of the particulate nature of matter.
2. Distinguish between opinion, philosophy, and empirical evidence for phenomena using knowledge of the process of scientific inquiry.
3. Apply critical thinking skills to make evidence based decisions on issues that affect the environment and the community.
4. Communicate basic chemistry concepts effectively orally and in writing.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Not Addressed	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The methods may include one or more of the following tools: examinations, quizzes, homework assignments, laboratory write-ups, research papers, small group problem solving of questions arising from application of course concepts and concerns to actual experience, oral presentations, or maintenance of a personal lab manual.

At least two written lecture examinations, including the final examination, are scheduled during the term. Nonscheduled quizzes may occasionally be given at the discretion of the instructor. Written examinations include typical problems encountered in previous class work and laboratory. Since this is a preparatory course, the student's competency in mathematical topics is important to completion of the course.

Course Activities and Design

Homework, Quizzes, Papers, Laboratory Experiments, Forum Discussion. Lecture and Laboratory Design

Course Content (Themes, Concepts, Issues and Skills)

Grades and competency will be determined according to student ability to demonstrate knowledge of specific chemistry topics and complete work by assigned deadlines; participate and complete reports of assigned laboratory experiments; and an evaluation of chemical topics assigned.

1. INTRODUCTION TO CHEMISTRY
    a. History
    b. Scientific Method
    c. How to Study Chemistry
2. MEASUREMENTS
    a. Scientific Notation
    b. Metric System
    c. Uncertainty
    d. Dimensional Analysis
3. CHEMISTRY CONCEPTS
    a. Classification of Matter
    b. Density
    c. Energy
    d. Atomic Structure
    e. Electromagnetic Spectrum
    f. Periodic Table
    g. Bonding
    h. Symbols, Formulas, Equations
    i. The Mole
    j. Chemical Reactions
4. CONTEMPORARY CHEMISTRY TOPICS SUCH AS:
    a. Environmental Chemistry
    b. Ozone Depletion
    c. Acid Rain
    d. Pollution
    e. Green House Effect
    f. Recycling
    g. Pharmaceutical Drugs
    h. Blood Chemistry
    i. Energy sources
    j. Fossil fuel
    k. Nuclear
    l. Alternate forms of Energy
    m. Nutritional

Department Notes

Chemistry 100 is a one term introductory chemistry class for students who are interested in the subject or need it for their degree. It also helps to prepare the student for successful entry to general college chemistry courses. The lecture portion of the course meets three hours per week and presents basic chemical principles, computations and selected topics of interest relating chemistry to the modern world. The laboratory period meets three hours per week and provides the student with an opportunity to have a hands-on experience of concepts presented in class as well as introduces them to simple laboratory techniques. The course is transferable as general science credit.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	CH 121	Course Title:	General Chemistry I
Course Credits:	5	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Explores the general principles of chemistry; atomic structure, mole concept, chemical reactions, stoichiometry, and gas laws. This is the first course of a three course sequence. Designed for transfer students or those in a health science program, e.g. Nursing, or for a laboratory science elective. Prerequisite: WR 115 and RD 115 or equivalent placement test scores. Prerequisite/Concurrent: MTH 95. Audit available.		
Course Outcomes:	1. Assess the impact of general chemical theory on phenomena encountered in everyday life including the environment and human health. 2. Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning. 3. Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems. 4. Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports. 5. Collaborate effectively with a diverse team to solve complex problems and accomplish tasks effectively. 6. Critically evaluate sources of scientific information to determine the validity of the data.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*

2. CGCC Core Learning Outcomes (CLO):

Through their respective disciplines, CGCC students who earn a degree can:

1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome #4: Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports. Students will write two papers on directed topics in chemistry. Students will write up to twelve laboratory reports of which must be coordinated with fellow students involved in their laboratory group. Students are regularly required to discuss topics in the classroom and laboratory environments. Students are required to ask and answer questions twice a week in our online LMS, Moodle.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome #3: Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems. Outcome #2: Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning. After ever class students are required to complete a homework assignment in which they must problem solve. Every week students are required to participate in a hands-on laboratory experiment that forces problem solving skills to be utilized. Every week students are required to ask a question that they have reflected as personally troubling to solve.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	

3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3. Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems. 4. Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports. 6. Critically evaluate sources of scientific information to determine the validity of the data. 1) Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
7. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	☒ no changes ☐ revised
8. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcome #1: Assess the impact of general chemical theory on phenomena encountered in everyday life including the environment and human health. Outcome #2: Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning. In every class we discuss how humans impact each other and the planet through the use of chemistry and chemistry related technologies. A first day of class discussion centers on the need for knowledgeable citizens in this democratic society.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

General Chemistry I

Course Number: CH 121
Transcript Title: General Chemistry I
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 5
Lecture Hours: 40
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisite / Concurrent
WR 121 (/courses/wr-121)
MTH 95 (http://www.cgcc.edu/courses/mth-95) or equivalent placement test scores

Course Description

Explores general chemistry, focusing on the following topics: Matter, Measurement, Problem Solving, Atoms, Elements, Molecules, Compounds, Chemical Equations, Chemical Quantities, Aqueous Reactions, Gases, Thermochemistry, and the Quantum-Mechanical Model of the Atom. This is the first course in a sequence that is designed for students who have had no previous training in chemistry. Entering students are expected to have a working knowledge of high school algebra, logarithms, and scientific notation. Prerequisite/Concurrent: MTH 95 or equivalent placement test scores, WR 121. Audit available.

Intended Outcomes

Upon successful completion students should be able to:

1. Assess the impact of general chemical theory on phenomena encountered in everyday life including the environment and human health.
2. Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning.
3. Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems.
4. Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports.
5. Collaborate effectively with a diverse team to solve complex problems and accomplish tasks effectively.
6. Critically evaluate sources of scientific information to determine the validity of the data.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Not Addressed	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

1. Hand in assignments for grading
2. Participation
3. Lab reports
4. Testing

Course Activities and Design

1. Active Learning: Problem-solving assignments
2. Full-class Learning: Recitation exercises
3. Collaborative Learning: Laboratory activities
4. Independent Learning: Reading and lecture

Course Content (Themes, Concepts, Issues and Skills)

1. Matter, Measurement, and Problem Solving
2. Atoms and Elements
3. Molecules, Compounds, and Chemical Equations
4. Chemical Quantities and Aqueous Reactions
5. Gases
6. Thermochistry
7. The Quantum-Mechanical Model of the Atom

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	CH 122	Course Title:	General Chemistry II
Course Credits:	5	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Includes stoichiometry, gases, oxidation-reduction, acid-base concepts, equilibrium, physical and chemical properties of solutions, nuclear chemistry, and organic hydrocarbons. This is the second course in a three course sequence. Prerequisite: CH 121. Audit available.		
Course Outcomes:	1. Assess the impact of physical and organic chemical theory on phenomena encountered in everyday life including the environment and human health. 2. Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning. 3. Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems. 4. Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports. 5. Collaborate effectively with a diverse team to solve complex problems and accomplish tasks effectively. 6. Critically evaluate sources of scientific information to determine the validity of the data.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**

Through their respective disciplines, CGCC students who earn a degree can:

1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome #4: Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports. Students will write two papers on directed topics in chemistry. Students will write up to twelve laboratory reports of which must be coordinated with fellow students involved in their laboratory group. Students are regularly required to discuss topics in the classroom and laboratory environments. Students are required to ask and answer questions twice a week in our online LMS, Moodle.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome #3: Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems. Outcome #2: Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning. After ever class students are required to complete a homework assignment in which they must problem solve. Every week students are required to participate in a hands-on laboratory experiment that forces problem solving skills to be utilized. Every week students are required to ask a question that they have reflected as personally troubling to solve.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	

3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3. Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems. 4. Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports. 6. Critically evaluate sources of scientific information to determine the validity of the data. Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
7. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	☒ no changes ☐ revised
8. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcome #1: Assess the impact of general chemical theory on phenomena encountered in everyday life including the environment and human health. Outcome #2: Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning. In every class we discuss how humans impact each other and the planet through the use of chemistry and chemistry related technologies. A first day of class discussion centers on the need for knowledgeable citizens in this democratic society.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.

General Chemistry II

Course Number: CH 122
Transcript Title: General Chemistry II
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 5
Lecture Hours: 40
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
CH 121 (/courses/ch-121)

Course Description

Explores general chemistry, focusing on the following topics: Periodic Properties of the Elements, Chemical Bonding, Liquids, Solids and Intermolecular Forces, Solutions, Chemical Kinetics, and Chemical Equilibrium. This is the second course in a sequence that is designed for students who have had no previous training in chemistry. Entering students are expected to have a working knowledge of high school algebra, logarithms, and scientific notation. Prerequisite: CH 121. Audit available.

Intended Outcomes

Upon successful completion students should be able to:

1. Assess the impact of physical and organic chemical theory on phenomena encountered in everyday life including the environment and human health.
2. Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning.
3. Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems.
4. Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports.
5. Collaborate effectively with a diverse team to solve complex problems and accomplish tasks effectively.
6. Critically evaluate sources of scientific information to determine the validity of the data.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Not Addressed	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

1. Hand in assignments for grading
2. Participation
3. Lab reports
4. Testing

Course Activities and Design

1. Active Learning: Problem-solving assignments
2. Full-class Learning: Recitation exercises
3. Collaborative Learning: Laboratory activities
4. Independent Learning: Reading and lecture

Course Content (Themes, Concepts, Issues and Skills)

1. Periodic Properties of the Elements
2. Chemical Bonding I
3. Chemical Bonding II
4. Liquid, Solids and Intermolecular Forces
5. Solutions
6. Chemical Kinetics
7. Chemical Equilibrium

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	CH 123	Course Title:	General Chemistry III
Course Credits:	5	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Includes fundamental principles of organic chemistry and biochemical processes. This is the third course of a three course sequence. Prerequisite: CH 122. Audit available.		
Course Outcomes:	1. Assess the impact of organic and biochemical theory on phenomena encountered in everyday life including the environment, nutrition and human health. 2. Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning. 3. Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems. 4. Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports. 5. Collaborate effectively with a diverse team to solve complex problems and accomplish tasks effectively. 6. Critically evaluate sources of scientific information to determine the validity of the data.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome #4: Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports. Students will write two papers on directed topics in chemistry. Students will write up to twelve laboratory reports of which must be coordinated with fellow students involved in their laboratory group. Students are regularly required to discuss topics in the classroom and laboratory environments. Students are required to ask and answer questions twice a week in our online LMS, Moodle.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome #3: Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems. Outcome #2: Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning. After ever class students are required to complete a homework assignment in which they must problem solve. Every week students are required to participate in a hands-on laboratory experiment that forces problem solving skills to be utilized. Every week students are required to ask a question that they have reflected as personally troubling to solve.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	

3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3. Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems. 4. Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports. 6. Critically evaluate sources of scientific information to determine the validity of the data. 1) Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	☒ no changes ☐ revised
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcome #1: Assess the impact of general chemical theory on phenomena encountered in everyday life including the environment and human health. Outcome #2: Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning. In every class we discuss how humans impact each other and the planet through the use of chemistry and chemistry related technologies. A first day of class discussion centers on the need for knowledgeable citizens in this democratic society.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

General Chemistry III

Course Number: CH 123
Transcript Title: General Chemistry III
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 5
Lecture Hours: 40
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
CH 122 (/courses/ch-122)

Course Description

Explores general chemistry, focusing on the following topics: Acids & Bases, Aqueous Ionic Equilibrium, Free Energy & Thermodynamics, Electrochemistry, Radioactivity & Nuclear Chemistry, and Organic Chemistry. This is the third course in a sequence that is designed for students who have had no previous training in chemistry. Entering students are expected to have a working knowledge of high school algebra, logarithms, and scientific notation. Prerequisite: CH 122. Audit available.

Intended Outcomes

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

1. Assess the impact of organic and biochemical theory on phenomena encountered in everyday life including the environment, nutrition and human health.
2. Apply critical thinking skills and an understanding of scientific inquiry to make evidence-based decisions on issues that affect the environment and the community and encourage lifelong learning.
3. Formulate mathematical and chemical models based on quantitative and qualitative reasoning in order to solve problems.
4. Communicate complex scientific concepts and reasoning effectively, both orally and through formal and informal writings and reports.
5. Collaborate effectively with a diverse team to solve complex problems and accomplish tasks effectively.
6. Critically evaluate sources of scientific information to determine the validity of the data.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Not Addressed	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

1. Hand in assignments for grading
2. Participation
3. Lab reports
4. Testing

Course Activities and Design

1. Active Learning: Problem-solving assignments
2. Full-class Learning: Recitation exercises
3. Collaborative Learning: Laboratory activities
4. Independent Learning: Reading and lecture

Course Content (Themes, Concepts, Issues and Skills)

1. Acids and Bases
2. Aqueous Ionic Equilibrium
3. Free Energy and Thermodynamics
4. Electrochemistry
5. Radioactivity and Nuclear Chemistry
6. Organic Chemistry

Department Notes

Columbia Gorge Community College Science Department stands by the following statement regarding science instruction:

Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised through observation and experimentation. “Creation science", “Intelligent design” or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College, therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	CH 221	Course Title:	General Chemistry I
Course Credits:	5	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Explores the general principles of chemistry; atomic structure, mole concept, chemical reactions, stoichiometry, and gas laws. This is the first course of a three course sequence. Designed for transfer students or those in a health science program, e.g. Nursing, or for a laboratory science elective. Prerequisite: WR 115 and RD 115 or equivalent placement test scores. Prerequisite/Concurrent: MTH 95. Audit available.		
Course Outcomes:	1. Apply the fundamental principles of measurement, matter, atomic theory and chemical bonding to subsequent courses in chemistry, biology, physics, geology, engineering and various other related disciplines that depend upon these principles for comprehension. 2. Apply the fundamental principles of measurement, matter, atomic theory and chemical bonding to their understanding of themselves and their natural and technological environments. 3. Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings. 4. Use effective collaborative skills when working with other people to solve complex problems and accomplish tasks effectively. 5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner. 6. Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome 5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner. Typical activities: Students will write papers on directed topics in chemistry. Students will write up to twelve laboratory reports of which must be coordinated with fellow students involved in their laboratory group. Students are regularly required to discuss topics in the classroom and laboratory environments. Students are required to ask and answer questions twice a week in our online LMS, Moodle.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome 3: Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings. Outcome 6: Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment. Typical activities: After ever class students are required to complete a homework assignment in which they must problem solve. Every week students are required to participate in a hands-on laboratory experiment that forces problem solving skills to be utilized. Every week students are required to ask a question that they have reflected as personally troubling to solve.

Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3. Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings. 5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner. 6. Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment. 1) Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
7. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	☒ no changes ☐ revised
8. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcome 2: Apply the fundamental principles of measurement, matter, atomic theory and chemical bonding to their understanding of themselves and their natural and technological environments. Typical activities: In every class we discuss how humans impact each other and the planet through the use of chemistry and chemistry related technologies. A first day of class discussion centers on the need for knowledgeable citizens in this democratic society.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

General Chemistry I

Course Number: CH 221
Transcript Title: General Chemistry I
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 5
Lecture Hours: 40
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisite / Concurrent
MTH 111 (/courses/mth-111)
WR 121 (/courses/wr-121)

Recommended
Successful completion of a high school or a college chemistry class with a lab component in the last 3 years.

Course Description

Introduces measurements, classification and properties of matter, nomenclature, atomic structure and modern atomic theory, periodic table and chemical periodicity, and chemical bonding. This is the first course in a three course sequence. Recommended for chemistry and other natural science majors, and paraprofessional majors in engineering, medicine and dentistry. Recommended: Successful completion of a high school or a college chemistry class with a lab component in the last 3 years. Prerequisite/concurrent: WR 121, MTH 111. Audit available.

Intended Outcomes

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

1. Apply the fundamental principles of measurement, matter, atomic theory and chemical bonding to subsequent courses in chemistry, biology, physics, geology, engineering and various other related disciplines that depend upon these principles for comprehension.
2. Apply the fundamental principles of measurement, matter, atomic theory and chemical bonding to their understanding of themselves and their natural and technological environments.
3. Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings.
4. Use effective collaborative skills when working with other people to solve complex problems and accomplish tasks effectively.
5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner.
6. Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Not	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace

Addressed	and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The assessment methods may include one or more of the following: examinations, quizzes, homework assignments, laboratory write-ups, research papers, small group problem solving, oral presentations or maintenance of a personal lab notebook.

Course Activities and Design

Homework, Quizzes, Papers, Laboratory Experiments, Forum Discussion. Lecture and Laboratory Design

Course Content (Themes, Concepts, Issues and Skills)

- Introduction to Chemistry including Historical Development
- Matter and Measurements
- Atoms, Molecules and Ions
- Nomenclature
- Atomic Structure and Theory
- Periodic Table
- Quantum Mechanics
- Chemical Periodicity
- Bonding Theories
- Molecular Geometry
- Bridge Topics to CH 222 (as time permits): Stoichiometry, Solid and Liquid States
- Special Topics:
  - Introduction to Spectroscopy, including Chromatography, MS and IR
  - Environmental Aspects of Chemistry including Greenhouse Effect and Ozone Depletion

Department Notes

Chemistry 221 is the first of a three term, 15-credit hour (5 hours/term), chemistry sequence designed to provide a year of general chemistry to science majors. It will meet transfer school requirements for such science majors as: chemistry, physics, chemical engineering, pre-medicine, and other pre-professional programs. The class consists of lecture, recitation and laboratory. The lecture time is used to provide the student with basic chemical concepts and mathematical applications to chemistry. The recitation time is for practicing problem solving in small group settings allowing for greater student-student as well as student-teacher contact and encouraging individual and team development. The laboratory re-enforces concepts presented in lecture and provides the student a hands-on opportunity to explore these.

Faculty effort in preparation and evaluation generally occurs outside of scheduled class hours. Class format is a combination of Faculty lectures and demonstrations, guided student interactions and supervised student application of lectures. Students produce written work such as lab notebooks, reports, and responses in writing to assigned questions, and the Instructor is expected to comment on and grade this written work outside of schedule class hours. This evaluation will take place on a regular basis throughout the term.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	CH 222	Course Title:	General Chemistry II
Course Credits:	5	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Introduces stoichiometry; chemical reactions and equations; thermo chemistry; physical states of matter including properties of gases, liquids, solids and solutions; an introduction to organic chemistry; and chemical kinetics. This is the second course in a three course sequence. Prerequisite: CH 221. Audit available.		
Course Outcomes:	1. Apply the fundamental principles of chemical reactions and stoichiometry, the states of matter, molecular and ionic structures and interactions, intermolecular forces, thermochemistry, and chemical kinetics to subsequent courses in chemistry, biology, physics, geology, engineering and various other related disciplines that depend upon these principles for comprehension. 2. Apply the fundamental principles of chemical reactions and stoichiometry, the states of matter, molecular and ionic structures and interactions, intermolecular forces, thermochemistry, and chemical kinetics to their understanding of themselves and their natural and technological environments. 3. Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings. 4. Use effective collaborative skills when working with other people to solve complex problems and accomplish tasks effectively. 5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner. 6. Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**

5. Be an LDC course that is eligible for the AAOT Discipline Studies List.

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome 5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner. Typical activities: Students will write papers on directed topics in chemistry. Students will write up to twelve laboratory reports of which must be coordinated with fellow students involved in their laboratory group. Students are regularly required to discuss topics in the classroom and laboratory environments. Students are required to ask and answer questions twice a week in our online LMS, Moodle.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome 3: Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings. Outcome 6: Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment.

	Typical activities: After ever class students are required to complete a homework assignment in which they must problem solve. Every week students are required to participate in a hands-on laboratory experiment that forces problem solving skills to be utilized. Every week students are required to ask a question that they have reflected as personally troubling to solve.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3. Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings. 5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner. 6. Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment. This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	☒ no changes ☐ revised
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcome 2: Apply the fundamental principles of chemical reactions and stoichiometry, the states of matter, molecular and ionic structures and interactions, intermolecular forces, thermochemistry, and chemical kinetics to their understanding of themselves and their natural and technological environments. Typical activities: In every class we discuss how humans impact each other and the planet through the use of chemistry and chemistry related technologies. A first day of class discussion centers on the need for knowledgeable citizens in this democratic society.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/28/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/28/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

General Chemistry II

Course Number: CH 222
Transcript Title: General Chemistry II
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 5
Lecture Hours: 40
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
CH 221 (/courses/ch-221)

Course Description

Introduces stoichiometry; chemical reactions and equations; thermo chemistry; physical states of matter including properties of gases, liquids, solids and solutions; an introduction to organic chemistry; and chemical kinetics. This is the second course in a three course sequence. Prerequisite: CH 221. Audit available.

Intended Outcomes

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

1. Apply the fundamental principles of chemical reactions and stoichiometry, the states of matter, molecular and ionic structures and interactions, intermolecular forces, thermochemistry, and chemical kinetics to subsequent courses in chemistry, biology, physics, geology, engineering and various other related disciplines that depend upon these principles for comprehension.
2. Apply the fundamental principles of chemical reactions and stoichiometry, the states of matter, molecular and ionic structures and interactions, intermolecular forces, thermochemistry, and chemical kinetics to their understanding of themselves and their natural and technological environments.
3. Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings.
4. Use effective collaborative skills when working with other people to solve complex problems and accomplish tasks.
5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner.
6. Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Not Addressed	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
	5. Recognize the consequences of human activity upon our

In-depth	social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The assessment methods may include one or more of the following: examinations, quizzes, homework assignments, laboratory write-ups, research papers, small group problem solving, oral presentations or maintenance of a personal lab notebook.

Course Activities and Design

Homework, Quizzes, Papers, Laboratory Experiments, Forum Discussion. Lecture and Laboratory Design

Course Content (Themes, Concepts, Issues and Skills)

1. Stoichiometry
2. Chemical Reactions
3. Thermochemistry
4. Properties of Gases, Liquids, Solids and Solutions
5. Intermolecular Forces
6. Organic Chemistry
7. Special Topics
8. Modern Materials
    a. Nanotechnology
    b. Liquid Crystals
    c. Semiconductors
    d. Ceramics
    e. Synthetic and Natural Polymers
9. Environmental Aspects of Chemistry
    a. Water Quality
10. Spectroscopy
    a. X-Ray Chrystallography
    b. NMR

Department Notes

Chemistry 222 is the second of a three term, 15-credit hour (5 hours/term), chemistry sequence designed to provide a year of general chemistry to science majors. It will meet transfer school requirements for such science majors as: chemistry, physics, chemical engineering, pre-medicine, and other pre-professional programs. The class consists of lecture, recitation and laboratory. The lecture time is used to provide the student with basic chemical concepts and mathematical applications to chemistry. The recitation time is for practicing problem solving in small group settings allowing for greater student-student as well as student-teacher contact and encouraging individual and team development. The laboratory re-enforces concepts presented in lecture and provides the student a hands-on opportunity to explore these.

Faculty effort in preparation and evaluation generally occurs outside of scheduled class hours. Class format is a combination of Faculty lectures and demonstrations, guided student interactions and supervised student application of lectures. Students produce written work such as lab notebooks, reports, and responses in writing to assigned questions, and the Instructor is expected to comment on and grade this written work outside of schedule class hours. This evaluation will take place on a regular basis throughout the term.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	CH 223	Course Title:	General Chemistry III
Course Credits:	5	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Introduces acid-base chemistry, ionic equilibria; electrochemistry; nuclear chemistry; thermodynamics; and descriptive chemistry topics. Special topics will be included as time and interest allows. This is the third course in a three course sequence. Prerequisite: CH 222. Audit available.		
Course Outcomes:	1. Apply the fundamental principles of chemical equilibrium as applied to solubility, acids and bases, oxidation and reduction and electrochemistry, and other reactive species, as well as thermodynamics and nuclear chemistry to subsequent courses in chemistry, biology, physics, geology, engineering and various other related disciplines that depend upon these principles for comprehension. 2. Apply the fundamental principles of chemical equilibrium as applied to solubility, acids and bases, oxidation and reduction and electrochemistry, and other reactive species, as well as thermodynamics and nuclear chemistry to the evaluation of information obtained in everyday life in order to make evidence-based decisions. 3. Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings. 4. Use effective collaborative skills when working with other people to solve complex problems and accomplish tasks effectively. 5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner. 6. Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome 5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner. Typical activities: Students will write papers on directed topics in chemistry. Students will write up to twelve laboratory reports of which must be coordinated with fellow students involved in their laboratory group. Students are regularly required to discuss topics in the classroom and laboratory environments. Students are required to ask and answer questions twice a week in our online LMS, Moodle.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcome 3: Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings. Outcome 6: Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment. Typical activities: After ever class students are required to complete a homework assignment in which they must problem solve. Every week students are required to participate in a hands-on laboratory experiment that forces problem solving skills to be utilized. Every week students are required to ask a question that they have reflected as personally troubling to solve.

Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3. Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings. 5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner. 6. Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of cCourse Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
7. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	☒ no changes ☐ revised
8. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcome 2: Apply the fundamental principles of chemical equilibrium as applied to solubility, acids and bases, oxidation and reduction and electrochemistry, and other reactive species, as well as thermodynamics and nuclear chemistry to the evaluation of information obtained in everyday life in order to make evidence-based decisions. Typical activities: In every class we discuss how humans impact each other and the planet through the use of chemistry and chemistry related technologies. A first day of class discussion centers on the need for knowledgeable citizens in this democratic society.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

General Chemistry III

Course Number: CH 223
Transcript Title: General Chemistry III
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 5
Lecture Hours: 40
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
CH 222 (/courses/ch-222)

Course Description

Introduces acid-base chemistry, ionic equilibria; electrochemistry; nuclear chemistry; thermodynamics; and descriptive chemistry topics. Special topics will be included as time and interest allows. This is the third course in a three course sequence. Prerequisite: CH 222. Audit available.

Intended Outcomes

Upon successful completion students should be able to:

1. Apply the fundamental principles of chemical equilibrium as applied to solubility, acids and bases, oxidation and reduction and electrochemistry, and other reactive species, as well as thermodynamics and nuclear chemistry to subsequent courses in chemistry, biology, physics, geology, engineering and various other related disciplines that depend upon these principles for comprehension.
2. Apply the fundamental principles of chemical equilibrium as applied to solubility, acids and bases, oxidation and reduction and electrochemistry, and other reactive species, as well as thermodynamics and nuclear chemistry to the evaluation of information obtained in everyday life in order to make evidence-based decisions.
3. Use mathematical and chemical reasoning skills, both qualitative and quantitative, to solve specific problems encountered in everyday life and professional settings.
4. Use effective collaborative skills when working with other people to solve complex problems and accomplish tasks effectively.
5. Use an understanding of written communication skills to effectively communicate complex scientific and technological ideas, models and conclusions through the generation of informal and formal writings and reports in a scientifically acceptable manner.
6. Critically evaluate sources of scientific information to logically decide the bias, strengths and weaknesses of the information concerning the effect of chemistry and chemical concepts on themselves and their environment.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Not Addressed	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental*

Responsibility)

Outcome Assessment Strategies

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The assessment methods may include one or more of the following: examinations, quizzes, homework assignments, laboratory write-ups, research papers, small group problem solving, oral presentations or maintenance of a personal lab notebook.

Course Activities and Design

Homework, Quizzes, Papers, Laboratory Experiments, Forum Discussion. Lecture and Laboratory Design

Course Content (Themes, Concepts, Issues and Skills)

1. Chemical Kinetics
2. Dynamic Equilibria
3. Acid-Base Chemistry
4. Thermodynamics
5. Electrochemistry
6. Nuclear Chemistry
7. Special Topics:
    a. Acid Rain
    b. Bioenergetics
    c. Industrial Processes
    d. Kinetics of cellular Metabolism
    e. Alternative Fuels
    f. Elements in Nature and Industry

Department Notes

Special topics will be included as time and interest allows. Special topics may include: acid rain, bioenergetics industrial processes, kinetics of cellular metabolism, alternative fuels and the use of elements in nature and industry. Recommended for chemistry and other natural science majors, pre-professional majors in engineering, medicine and dentistry. Chemistry 223 is the third of a three term, 15-credit hour (5 hours/term), chemistry sequence designed to provide a year of general chemistry to science majors. It will meet transfer school requirements for such science majors as: chemistry, physics, chemical engineering, pre-medicine, and other pre-professional programs. The class consists of lecture, recitation and laboratory. The lecture time is used to provide the student with basic chemical concepts and mathematical applications to chemistry. The recitation time is for practicing problem solving in small group settings allowing for greater student-student as well as student-teacher contact and encouraging individual and team development. The laboratory re-enforces concepts presented in lecture and provides the student a hands-on opportunity to explore these.

Faculty effort in preparation and evaluation generally occurs outside of scheduled class hours. Class format is a combination of Faculty lectures and demonstrations, guided student interactions and supervised student application of lectures. Students produce written work such as lab notebooks, reports, and responses in writing to assigned questions, and the Instructor is expected to comment on and grade this written work outside of schedule class hours. This evaluation will take place on a regular basis throughout the term.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	ESR 171	Course Title:	Environmental Science: Biological Perspectives
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Develops an understanding of environmental topics that are primarily biological in nature. Includes human population issues, matter and energy resources, ecosystems, environmental ethics, and food and land resources. The associated laboratories will illustrate these topics. Prerequisites: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Express graphically, orally or in writing form, basic elements and functions of ecosystems. 2. Identify and express interactions of humans and the environment. 3. Utilize field and laboratory methods/technologies to measure and describe ecosystems. 4. Understand the functions of ecosystems and human effects on them.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)

4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcomes: 1. Express graphically, orally or in writing basic elements of biology in the environment. 2. Identify and express interactions between humans and the environment. Course Content: This CLO is addressed in depth because this course utilizes many modes of student communication about chemistry in the natural world. This content may be assessed utilizing one or more of the following activities: • Essay exams • Chapter review homework assignments • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcomes: 3. Utilize field and laboratory methods/technologies to measure and collaboratively describe environmental factors. 4. Understand the functions of ecosystems and human effects on them. Course Content: This CLO is addressed in depth here because science courses rely on critical thinking and creative problem-solving in evaluating the information and making reasoned efforts to relate it to lecture and lab. Students are encouraged to personally reflect on how biology in the natural world affects them and their ability to evaluate risks. This content may be assessed utilizing one or more of the following activities: • Essay exams • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class • Journal entries

Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3. Utilize field and laboratory methods/technologies to measure and describe ecosystems. Course Content: This CLO is addressed in depth because the laboratory utilizes data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcomes: 2. Identify and express interactions between humans and the environment. 4. Understand the functions of ecosystems and human effects on them. Course Content: This CLO is addressed minimally because this course encourages appreciation of unique diversity of many cultures and their links to human interaction with Environment. Understanding a genetic level of organization can allow for constructive outcomes with cultural differences but this is not a class on cultural awareness. This content may be assessed utilizing one or more of the following activities: • Essay exams • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcomes: 2. Identify and express interactions between humans and the environment. 3. Utilize field and laboratory methods/technologies to measure and collaboratively describe environmental factors. 4. Understand the functions of ecosystems and human effects on them. Course Content: This CLO is addressed in depth because this course emphasizes human responsibility toward others and towards Environment in the community. This content may be assessed utilizing one or more of the following activities: • Essay exams • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class • Chapter review homework assignments

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Environmental Science: Biological Perspectives

Course Number: ESR 171
Transcript Title: Environ Science:Bio Perspect
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 20 (/courses/mth-20) or equivalent placement test scores. Prerequisite/concurrent: WR 121 (/courses/wr-121).

Course Description

Develops an understanding of environmental topics that are primarily biological in nature. Includes human population issues, matter and energy resources, ecosystems, environmental ethics, and food and land resources. The associated laboratories will illustrate these topics. Prerequisites: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student will be able to collaboratively and independently:

1. Express graphically, orally or in writing form, basic elements and functions of ecosystems.
2. Identify and express interactions of humans and the environment.
3. Utilize field and laboratory methods/technologies to measure and describe ecosystems.
4. Understand the functions of ecosystems and human effects on them.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Minimally	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

Course outcome assessment will be achieved using a combination of the following: essay tests, multiple choice and short answer quizzes, write-ups of field and laboratory experiences, a journal for self-assessment and exploration of topics, and an oral presentation with accompanying visual/graphical representations (may be done individually or collaboratively).

Course Activities and Design

Class format is a combination of Faculty lectures and demonstrations, guided student interactions and supervised student application of lectures. Students produce written work such as lab notebooks, reports, and responses in writing to assigned questions.

Course Content (Themes, Concepts, Issues and Skills)

Concepts and Themes

- Energy flow and matter transformation within biologic systems
- Carbon cycle
- Fundamentals of ecosystems
- Human Impacts on biologic systems

Process Skills (Competency skills)

- Relate scientific concepts to local and regional issues.
- Understand the sources of scientific uncertainty.
- Locate and access information from non-governmental organizations and governmental agencies.
- Think critically.
- Collaborate with peers - Work effectively in groups.
- Present conclusions with scientific rigor.

Department Notes

To clarify the teaching of evolution and its place in the classroom, the Columbia Gorge Community College Science Departments stand by the following statements about what is science and how the theory of evolution is the major organizing theory in the discipline of the biological sciences.

• Science is a fundamentally non-dogmatic and self-correcting investigatory process. In science, a theory is neither a guess, dogma, nor myth. The theories developed through scientific investigation are not decided in advance, but can be and often are modified and revised through observation and experimentation.

• The theory of evolution meets the criteria of a scientific theory. In contrast, creation "science" is neither self-examining nor investigatory. Creation "science" is not considered a legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

Science (ESR) instructors of Columbia Gorge Community College will teach the theory of evolution not as absolute truth but as the most widely accepted scientific theory on the diversity of life. We, the Biology Subject Area Curriculum Committee at Columbia Gorge Community College, therefore stand with such organizations as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula.

Instructor is expected to comment on and grade written work outside of scheduled class hours. Evaluation will take place on a regular basis throughout the term.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	ESR 172	Course Title:	Environmental Science: Chemical Perspectives
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Develops an understanding of environmental topics that are primarily chemical in nature. Includes air pollution, global warming, toxicology, risk assessment, water pollution, and hazardous waste. The associated laboratories will illustrate these topics. Prerequisite: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Express graphically, orally or in writing basic elements of chemistry in the environment. 2. Identify and express interactions between humans and the environment. 3. Utilize field and laboratory methods/technologies to measure and collaboratively describe environmental factors. 4. Understand environmental chemistry and human effects upon it.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)

5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcomes: 1. Express graphically, orally or in writing basic elements of chemistry in the environment. 2. Identify and express interactions between humans and the environment. Course Content: This CLO is addressed in depth because this course utilizes many modes of student communication about chemistry in the natural world. This content may be assessed utilizing one or more of the following activities: • Essay exams • Chapter review homework assignments • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcomes: 3. Utilize field and laboratory methods/technologies to measure and collaboratively describe environmental factors. 4. Understand environmental chemistry and human effects upon it. Course Content: This CLO is addressed in depth here because science courses rely on critical thinking and creative problem-solving in evaluating the information and making reasoned efforts to relate it to lecture and lab. Students are encouraged to personally reflect on how chemistry in the natural world affects them and their ability to evaluate risks. This content may be assessed utilizing one or more of the following activities: • Essay exams • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class • Journal entries

Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
5. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3. Utilize field and laboratory methods/technologies to measure and describe ecosystems. Course Content: This CLO is addressed in depth because the laboratory utilizes data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
6. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcomes: 2. Identify and express interactions between humans and the environment. 4. Understand environmental chemistry and human effects upon it. Course Content: This CLO is addressed minimally because this course encourages appreciation of unique diversity of many cultures and their links to human interaction with Environment. Understanding a genetic level of organization can allow for constructive outcomes with cultural differences but this is not a class on cultural awareness. This content may be assessed utilizing one or more of the following activities: • Essay exams • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class
7. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcomes: 2. Identify and express interactions between humans and the environment. 3. Utilize field and laboratory methods/technologies to measure and collaboratively describe environmental factors. 4. Understand environmental chemistry and human effects upon it. Course Content: This CLO is addressed in depth because this course emphasizes human responsibility toward others and towards Environment in the community. This content may be assessed utilizing one or more of the following activities: • Essay exams • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class • Chapter review homework assignments

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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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Environmental Science: Chemical Perspectives

Course Number: ESR 172
Transcript Title: Environ Science:Chem Perspect
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 20 (/courses/mth-20) or equivalent placement test scores. Prerequisite/concurrent: WR 121 (/courses/wr-121).

Course Description

Develops an understanding of environmental topics that are primarily chemical in nature. Includes air pollution, global warming, toxicology, risk assessment, water pollution, and hazardous waste. The associated laboratories will illustrate these topics. Prerequisites: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student will be able to collaboratively and independently:

1. Express graphically, orally or in writing form, basic elements of chemistry in the environment.
2. Identify and express interactions of humans and the environment.
3. Utilize field and laboratory methods/technologies to measure and describe environmental factors.
4. Understand environmental chemistry and human effects upon it.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Minimally	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

Course outcome assessment will be achieved using a combination of the following: essay tests, multiple choice and short answer quizzes, write-ups of field and laboratory experiences, a journal for self-assessment and exploration of topics, and an oral presentation with accompanying visual/graphical representations (may be done individually or collaboratively).

Course Activities and Design

Class format is a combination of Faculty lectures and demonstrations, guided student interactions and supervised student application of lectures. Students produce written work such as lab notebooks, reports, and responses in writing to assigned questions, and the Instructor is expected to comment on and grade this written work outside of schedule class hours. This evaluation will take place on a regular basis throughout the term.

Course Content (Themes, Concepts, Issues and Skills)

Concepts and Themes

- Energy flow and matter transformations
- Human mediated environmental change (ozone depletion, global climate change, acid rain)
- Fundamentals of periodic table
- Chemical pollution of atmospheric, hydrologic, and biologic systems

Process Skills (Competency skills)

- Relate scientific concepts to local and regional issues.
- Understand the sources of scientific uncertainty.
- Locate and access information from non-governmental organizations and governmental agencies.
- Think critically.
- Collaborate with peers - Work effectively in groups.
- Present conclusions with scientific rigor.

Department Notes

To clarify the teaching of evolution and its place in the classroom, the Columbia Gorge Community College Science Departments stand by the following statements about what is science and how the theory of evolution is the major organizing theory in the discipline of the biological sciences.

· Science is a fundamentally non-dogmatic and self-correcting investigatory process. In science, a theory is neither a guess, dogma, nor myth. The theories developed through scientific investigation are not decided in advance, but can be and often are modified and revised through observation and experimentation.

· The theory of evolution meets the criteria of a scientific theory. In contrast, creation "science" is neither self-examining nor investigatory. Creation "science" is not considered a legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

Science (ESR) instructors of Columbia Gorge Community College will teach the theory of evolution not as absolute truth but as the most widely accepted scientific theory on the diversity of life. We, the Biology Subject Area Curriculum Committee at Columbia Gorge Community College, therefore stand with such organizations as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	ESR 173	Course Title:	Environmental Science: Geological Perspectives
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Develops an understanding of environmental topics that are primarily geological in nature. Includes geology basics, soil resources, hydrogeology, nonrenewable mineral and energy resources, perpetual energy resources, and solid waste. The associated laboratories will illustrate these topics. Prerequisite: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Express graphically, orally or in writing basic elements of environmental earth-sciences. 2. Identify and express geological interactions between humans and the environment. 3. Utilize field and laboratory methods/technologies to measure and describe environmental factors. 4. Understand geologic time scales and processes.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)

5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcomes: 1. Express graphically, orally or in writing form, basic elements of earth science and geology in the environment. 2. Identify and express geological interactions of humans and the environment. Course Content: This CLO is addressed in depth because this course utilizes many modes of student communication about earth science and geology in the natural world. This content may be assessed utilizing one or more of the following activities: • Essay exams • Chapter review homework assignments • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised Outcomes: 3. Utilize field and laboratory methods/technologies to measure and describe environmental factors. 4. Understand geologic time scales and processes. Course Content: This CLO is addressed in depth here because science courses rely on critical thinking and creative problem-solving in evaluating the information and making reasoned efforts to relate it to lecture and lab. Students are encouraged to personally reflect on how earth science and geology affect them and their ability to evaluate risks by looking at timescale and making predictions. This content may be assessed utilizing one or more of the following activities: • Essay exams • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class • Journal entries

Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3. Utilize field and laboratory methods/technologies to measure and describe ecosystems. Course Content: This CLO is addressed in depth because the laboratory utilizes data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcomes: 2. Identify and express geological interactions of humans and the environment. 4. Understand geologic time scales and processes. Course Content: This CLO is addressed minimally because this course encourages appreciation of unique diversity and contributions of many cultures and their links to human interaction with Environment. Understanding a genetic level of organization can allow for constructive outcomes with cultural differences but this is not a class on cultural Awareness. This content may be assessed utilizing one or more of the following activities: • Essay exams • Multiple-choice quizzes • Write-ups of field and lab investigations • Oral presentations with accompanying Visual/graphical representations on a subject relevant to class
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised Outcomes: 2. Identify and express geological interactions of humans and the environment. 3. Utilize field and laboratory methods/technologies to measure and describe environmental factors. 4. Understand geologic time scales and processes. Course Content: This CLO is addressed in depth because this course emphasizes human responsibility toward others and towards Environment in the community. Comparing change over geologic time can add and inform when deciding about human impact on the natural world and relevant lab work adds to scientific body of evidence. This content may be assessed utilizing one or more of the following activities: • Essay exams • Multiple-choice quizzes • Write-ups of field and lab investigations

	• Oral presentations with accompanying Visual/graphical representations on a subject relevant to class • Chapter review homework assignments • Write-ups of field and lab investigations

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Environmental Science: Geological Perspectives

Course Number: ESR 173
Transcript Title: Environ Science:Geolog Perspect
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 20 (/courses/mth-20) or equivalent placement test scores. Prerequisite/concurrent: WR 121 (/courses/wr-121).

Course Description

Develops an understanding of environmental topics that are primarily geological in nature. Includes geology basics, soil resources, hydrogeology, nonrenewable mineral and energy resources, perpetual energy resources, and solid waste. The associated laboratories will illustrate these topics. Prerequisites: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student will be able to collaboratively and independently:

1. Express graphically, orally or in writing form, basic elements of environmental earth-sciences.
2. Identify and express geological interactions of humans and the environment.
3. Utilize field and laboratory methods/technologies to measure and describe environmental factors.
4. Understand geologic time scales and processes.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Minimally	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

Course outcome assessment will be achieved using a combination of the following: essay tests, multiple choice and short answer quizzes, write-ups of field and laboratory experiences, a journal for self-assessment and exploration of topics, and an oral presentation with accompanying visual/graphical representations (may be done individually or collaboratively).

Course Activities and Design

Class format is a combination of Faculty lectures and demonstrations, guided student interactions and supervised student application of lectures. Students produce written work such as lab notebooks, reports, and responses in writing to assigned questions, and the Instructor is expected to comment on and grade this written work outside of schedule class hours. This evaluation will take place on a regular basis throughout the term.

Course Content (Themes, Concepts, Issues and Skills)

Concepts and Themes

- Geologic Process
- Geologic hazards (earthquakes, mass moments, volcanoes, flooding)
- Geologic resources (mineral, soil, water and energy)

Process Skills (Competency skills)

- Relate scientific concepts to local and regional geologic resources and hazards.
- Understand the sources of scientific uncertainty.
- Locate and access information from non-governmental organizations and governmental agencies.
- Think critically.
- Collaborate with peers - Work effectively in groups.
- Present conclusions with scientific rigor.

Department Notes

To clarify the teaching of evolution and its place in the classroom, the Columbia Gorge Community College Science Departments stand by the following statements about what is science and how the theory of evolution is the major organizing theory in the discipline of the biological sciences.

· Science is a fundamentally non-dogmatic and self-correcting investigatory process. In science, a theory is neither a guess, dogma, nor myth. The theories developed through scientific investigation are not decided in advance, but can be and often are modified and revised through observation and experimentation.

· The theory of evolution meets the criteria of a scientific theory. In contrast, creation "science" is neither self-examining nor investigatory. Creation "science" is not considered a legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

Science (ESR) instructors of Columbia Gorge Community College will teach the theory of evolution not as absolute truth but as the most widely accepted scientific theory on the diversity of life. We, the Biology Subject Area Curriculum Committee at Columbia Gorge Community College, therefore stand with such organizations as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	G 201	Course Title:	Geology
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Introduces physical geology which deals with minerals, rocks, internal structure of the earth and plate tectonics. Includes weekly lab. Prerequisite: MTH 95 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Use an understanding of rock and mineral characterization and classification to infer the geologic processes which formed individual rock and mineral specimens. 2. Analyze the development, scope, and limitations of plate tectonics and utilize plate tectonics to explain the Earth's earthquake and volcanic activity as well as the occurrence of common rocks, minerals, and economic deposits. 3. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of solid earth processes identifying areas of congruence and discrepancy. 4. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by volcanoes and earthquakes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these hazards and risks, and effectively communicate the results of this analysis to their peers. 5. Assess the contributions of physical geology to our evolving understanding of global change and sustainability while placing the development of physical geology in its historical and cultural context.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**

   Through their respective disciplines, CGCC students who earn a degree can:

   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcomes 3, 4 2) This is a lab science course, where students are required to attend labs in which various content-based experiments are completed. In these labs students often work in groups, discussing the material and are required to write up lab answers for submission to their instructor. Some instructors also implement discussions during lectures to help students communicate various geological concepts the instructor has introduced in lecture to one another. Through assignments such as labs and in class discussions help, students gain the knowledge to be able to describe Earth materials and to explain how these materials relate to the rock cycle, along with the ability to describe the relationship between volcanoes, earthquakes and plate tectonics. Many instructors also implement a final project in which students must either write a paper, make a poster, or present a topic in front of the class. These projects involve researching an area covered in this course in more detail (such as the use of earthquakes to study the interior of the earth).

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcomes 3, 4, 5 2) Students are asked in lab sessions to identify mineral and rock samples, and then use that information to interpret the geologic process responsible for each (Hawaii style lava flow, explosive Mt. St. Helens eruption, river bed, convergent plate boundary, etc.) This helps them also develop an understanding of the origin, activity, structure and types of volcanoes that exist. Students also learn about the scientist and hypothesis leading up to the current evidence to support the theory of plate tectonics, emphasizing the important pieces each scientist contributed and what was missing. Some instructors choose to offer field trips and on these trips students are asked to make observations on their own, then discuss these observations and any data collected in small groups, and then discuss the group consensus with the entire class. Students are often responsible for learning background information about the field site before attending the trip. The final course project many instructors choose to require involve students choosing their own topic related to the course, with some important assignments leading up to the submission of the final draft (Proposal, rough draft, self-reflection, etc.)
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 2. Analyze the development, scope, and limitations of plate tectonics and utilize plate tectonics to explain the Earth's earthquake and volcanic activity as well as the occurrence of common rocks, minerals, and economic deposits. 3. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of solid earth processes identifying areas of congruence and discrepancy. 4. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by volcanoes and earthquakes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these hazards and risks, and effectively communicate the results of this analysis to their peers. Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations

5. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	☒ no changes ☐ revised
6. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcomes 4, 5, 6 2) Once students have an understanding of the various geologic processes covered in the course (rocks, minerals, earthquakes, volcanoes, etc.) the class can move forward in lectures and labs to discuss how humans interact with the various earth systems. Weathering and erosion is a common area of overlap, with human activities such as road and building construction erosion can be amplified in some cases and decreased in others, volcanic and earthquake hazard mitigation is another area of overlap (ex: sediment retention dam built on Mt. St. Helens to stop lahar flows from clogging the Columbia River). Building locations to decrease earthquake damage, increased Carbon Dioxide and Sulfur Dioxide emissions and implications for acid rain and weathering, etc.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/8/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/8/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Physical Geology

Course Number: G 201
Transcript Title: Physical Geology
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 95 (http://cgcc.us/courses/mth-95) or equivalent placement test scores

Prerequisite / Concurrent
WR 121 (/courses/wr-121)

Course Description

Introduces physical geology which deals with minerals, rocks, internal structure of the earth and plate tectonics. Includes weekly lab. Prerequisite: MTH 95 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student who successfully completes this course should be able to:

1. Use an understanding of rock and mineral characterization and classification to infer the geologic processes which formed individual rock and mineral specimens.
2. Analyze the development, scope, and limitations of plate tectonics and utilize plate tectonics to explain the Earth's earthquake and volcanic activity as well as the occurrence of common rocks, minerals, and economic deposits.
3. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of solid earth processes identifying areas of congruence and discrepancy.
4. Make field and laboratory based observations and measurements of rocks and minerals and/or Earth's internal process, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of solid earth processes identifying areas of congruence and discrepancy.
5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by volcanoes and earthquakes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these hazards and risks, and effectively communicate the results of this analysis to their peers.
6. Assess the contributions of physical geology to our evolving understanding of global change and sustainability while placing the development of physical geology in its historical and cultural context.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Not	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace

Addressed	and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The methods may include one or more of the following tools: examinations, quizzes, homework assignments, laboratory write-ups, research papers, small group problem solving of questions arising from application of course concepts and concerns to actual experience, oral presentations, or maintenance of a personal work journal.

Course Activities and Design

The material in this course will be presented in a combination of lecture/discussion and laboratory exercises. Other educationally sound methods may be employed such as guest lectures, field trips, research papers, and small group work.

Course Content (Themes, Concepts, Issues and Skills)

1. Distinguish between rocks and minerals.
2. Describe the major types of materials that make up the Earth's crust and explain how each material relates to the rock cycle.
3. Describe and use the properties involved in mineral identification.
4. Classify commonly occurring minerals.
5. Classify commonly occurring igneous, sedimentary and metamorphic rocks.
6. Develop an understanding of the origin, activity, structure, and kinds of volcanoes.
7. Describe the relationship of volcanoes and earthquakes to plate tectonics.
8. Understand how earthquakes are generated.
9. Use three earthquake records to locate the epicenter of an earthquake.
10. Describe how earthquakes can be used to study the interior of the Earth.
11. Discuss the evidence supporting the theory of plate tectonics.
12. Examine weathering and the formation of soils (this topic may be covered in either G201 or G202 at the discretion of the instructor).
13. Develop an understanding of the kinds and origins or geologic structures (this topic may be covered in either G201 or G202 at the discretion of the instructor).
14. Examine the role of plate tectonics in shaping the surface of the Earth.
15. Describe the structure and composition of the interior of the Earth.

Topics to be covered include:

1. Minerals
   a. Chemistry and bonding
   b. Structure of atoms
   c. Identification (color, luster, streak, hardness, cleavage, fracture, other features)
   d. Terrestrial abundances of elements
2. Igneous Rocks
   a. Formation and crystallization of magma (partial melting, Bowen’s reaction series)
   b. Classification (texture and chemistry)
   c. Intrusive rock structures (neck, dike, sill, batholith)
   d. Relationship to plate tectonics
3. Volcanoes and Volcanism
   a. Relationship between magma chemistry and gas content and type of eruption
   b. Eruptive styles (effusive vs. pyroclastic)
   c. Volcanic Features associated with basaltic volcanism (shield volcano, cinder cone, columnar jointing, fire fountaining, lava channels/tubes, pillow lavas)
   d. Volcanic Features associated with andesitic/rhyolitic volcanism (composite cones/stratovolcanoes, calderas, domes)
   e. Volcanic hazards (lahars, gas emissions)
4. Weathering (may be taught in G202 instead)
   a. Mechanical weathering (frost wedging, abrasion, exfoliation)
   b. Chemical weathering (dissolution/solution, oxidation, hydration)
   c. Factors that affect weathering rates
   d. Products of weathering (sand, clay, iron oxides/hydroxides)

   e. Soil structure
   f. Types of soils (pedocals, pedalfers, laterites)
5. Sedimentary Rocks
   a. Sediment transport and texture (grain size and shape)
   b. Sedimentary structures (bedding (planar, graded, cross), mudcracks)
   c. Lithification (compaction and cementation)
   d. Classification of sediments (clastic/detrital: clay, silt, mud, sand, gravel vs. chemical)
   e. Classification of sedimentary rocks (clastic/detrital: shale, mudstone, siltstone, sandstone, arkose, greywacke, breccia, conglomerate vs. chemical: limestone, chert, coal, evaporates)
   f. Introduction to sedimentary depositional environments (may be left out)
6. Metamorphic Rocks
   a. Conditions promoting metamorphism (heat, pressure, fluids)
   b. Types of metamorphism (contact, regional)
   c. Causes of foliation
   d. Common metamorphic rocks (slate, phyllite, schist, gneiss, marble, quartzite, hornfels)
   e. Relationship to plate tectonics
7. Structural Geology (may be taught in G202 instead)
   a. Stress and strain
   b. Folds (syncline, anticline, dome, basin)
   c. Faults (normal, reverse, strike-slip)
   d. Strike and dip
   e. Mountain building and relation to stress
   f. Relationship to plate tectonics
8. Earthquakes
   a. Epicenter vs. focus
   b. Seismic waves (P, S, surface)
   c. Magnitude scales vs. Intensity scale
   d. Locating an earthquake epicenter
   e. Earthquake hazards
   f. Relationship to plate tectonics
9. Earth's Interior
   a. Chemical layers of Earth (crust, mantle core) vs. Mechanical layers (lithosphere, asthenosphere, lower mantle/mesosphere, outer core, inner core)
   b. Using seismic waves to explore Earth's interior
10. Plate Tectonics
   a. Alfred Wegener and evidence for continental drift
   b. Magnetic reversals and sea-floor spreading
   c. Using hot spots to determine plate motions
   d. Rifting and the origin of ocean basins
   e. Features associated with each type of plate boundary (divergent, convergent, transform)
   f. Ophiolites
   g. Subduction and related volcanism
   h. Continental collisions and relationship to mountain building
   i. Convection as a driving force of plate tectonics

Department Notes

Physical Geology G201 is intended for both geology majors and nonmajors, and is the first term of a year of beginning college geology. Physical Geology is concerned with earth materials and geologic processes acting on the earth. G201 deals mainly with rocks and minerals, and introduces students to internally-driven geologic processes. This course can be used to partly fulfill graduation requirements for the Associate Degree, and has been approved for block transfer. The text and materials have been chosen by the faculty and the emphasis of the course will be the viewpoint of the author(s). This includes the concepts of geologic time and the evolution of the Earth.

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

> Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised through observation and experimentation. "Creation science", "Intelligent design" or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

Students are expected to be able to read and comprehend college-level science texts and perform basic mathematical operations in order to successfully complete this course.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	G 202	Course Title:	Physical Geology
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Introduces physical geology which deals with mass wasting, streams, glaciers, deserts, beaches, groundwater, and use of topographic maps. Includes weekly lab. Prerequisite: MTH 95 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Use an understanding of landform characterization and classification to infer the geologic processes which formed specific landforms. 2. Analyze how earth materials, uplift, subsidence, erosion, transport, deposition, climate, biological activity and time interact to create landscapes. 3. Make field and laboratory based observations and measurements of landforms and/or surface processes, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of earth surface processes identifying areas of congruence and discrepancy. 4. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by flooding, slope processes and coastal erosion both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these hazards and risks, and effectively communicate the results of this analysis to their peers. 5. Assess the contributions of physical geology to our evolving understanding of global change and sustainability while placing the development of physical geology in its historical and cultural context.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*

2. CGCC Core Learning Outcomes (CLO):

Through their respective disciplines, CGCC students who earn a degree can:

1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcome #s 1, 2, 3, 4 2) This is a lab science course, where students are required to attend labs in which various content-based experiments are completed. In these labs students often work in groups, discussing the material and are required to write up lab answers for submission to their instructor. Some instructors also implement discussions during lectures to help students communicate various geological concepts the instructor has introduced in lecture to one another. Through assignments such as labs and in class discussions help students gain the knowledge to be able to describe Earth processes and to explain how to interpret what processes shaped the landscape based on what geological landforms are present (ex: sinkhole formation as a result of groundwater erosion via dissolution of limestone) Many instructors also implement a final project in which students must either write a paper, make a poster, or present a topic in front of the class. These projects involve researching an area covered in this course in more detail, such as the risks posed by mass movement (landslides), flooding, groundwater erosion (sinkholes), coastal erosion, etc.
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcome #s 3, 4 2) Students are asked in lab sessions to identify geologic landforms associated with various surface processes (mass wasting, ground water, etc.) and once identified, they must determine how these formed through erosion, transport and deposition. Often they are also asked to determine the geologic hazards present as a result of the dominant surface process. Ex: Identifying slopes subject to mass wasting in the past, outlining various events (scarp, toe, etc.) determining the type of movement, triggers and

	potential areas that may move in the future. Students also learn about the various surface processes that exist on Earth, and are asked to discuss what hazards can be produced along with how to mitigate these events. Some instructors choose to offer field trips and on these trips students are asked to make observations on their own, then discuss these observations and any data collected in small groups, and then discuss the group consensus with the entire class. Students are often responsible for learning background information about the field site before attending the trip. The final course project many instructors choose to require involve students choosing their own topic related to the course, with some important assignments leading up to the submission of the final draft (Proposal, rough draft, self-reflection, etc.)
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3 Make field and laboratory based observations and measurements of landforms and/or surface processes, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of earth surface processes identifying areas of congruence and discrepancy. 4 Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by flooding, slope processes and coastal erosion both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these hazards and risks, and effectively communicate the results of this analysis to their peers. 5 Assess the contributions of physical geology to our evolving understanding of global change and sustainability while placing the development of physical geology in its historical and cultural context. Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome #s 5, 6 2) This course dives into many different geologic hazards that impact not only the United States, but every country around the world. In lectures, labs or homework assignments, instructors often give real-world examples or case studies of various events that have impacted populations in the U.S. and abroad. In depth overview of the area, surface process, community/city nearby, triggers, event details, warning systems (or lack thereof), and response are often evaluated (ex: Oso, WA landslide, Florida sinkholes, shrinking of the Aral Sea & Lake Chad, flooding in Venice, etc.)

	The Pacific Northwest, and The Columbia River Gorge has great Native American legends to describe how the native peoples viewed the formation of various landforms in the gorge (Bonneville Landslides Complex, Mt. Hood, etc.)
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome #s 4, 5, 6 2) Once students have an understanding of the various geologic processes covered in the course (streams, mass wasting, glaciers, etc.) the class can move forward in lectures and labs to discuss how humans interact with the various earth systems. Weathering and erosion is a common area of overlap, with human activities such as road and building construction erosion can be amplified in some cases and decreased in others. Ex: Sinkholes in Florida, adding weight of a building plus a drop in groundwater table due to increased population can trigger the home to collapse into a sinkhole. Flood zone maps for various rivers, what can be built in what zone, should these maps be revised due to climate change and sea level rise? Disappearance of glaciers and ice sheets due to global climate change, shrinking of desert lakes and seas due to both climate change and increased human use for irrigation, etc.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Physical Geology

Course Number: G 202
Transcript Title: Physical Geology
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 95 (http://cgcc.us/courses/mth-95) or equivalent placement test scores

Prerequisite / Concurrent
WR 121 (/courses/wr-121)

Course Description

Introduces physical geology which deals with mass wasting, streams, glaciers, deserts, beaches, groundwater, and use of topographic maps. Includes weekly lab. Prerequisite: MTH 95 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student who successfully completes this course should be able to:

1. Use an understanding of landform characterization and classification to infer the geologic processes which formed specific landforms.
2. Analyze how earth materials, uplift, subsidence, erosion, transport, deposition, climate, biological activity and time interact to create landscapes.
3. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of earth surface processes identifying areas of congruence and discrepancy.
4. Make field and laboratory based observations and measurements of landforms and/or surface processes, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of earth surface processes identifying areas of congruence and discrepancy.
5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by flooding, slope processes and coastal erosion both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these hazards and risks, and effectively communicate the results of this analysis to their peers.
6. Assess the contributions of physical geology to our evolving understanding of global change and sustainability while placing the development of physical geology in its historical and cultural context.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Minimally	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
	5. Recognize the consequences of human activity upon our

In-depth	social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The methods may include one or more of the following tools: examinations, quizzes, homework assignments, laboratory write-ups, research papers, small group problem solving of questions arising from application of course concepts and concerns to actual experience, oral presentations, or maintenance of a personal work journal.

Course Activities and Design

The material in this course will be presented in a combination of lecture/discussion and laboratory exercises. Other educationally sound methods may be employed such as guest lectures, field trips, research papers, and small group work.

Course Content (Themes, Concepts, Issues and Skills)

1. Identify and classify the landforms associated with mass wasting, groundwater, streams, glaciers, deserts and shorelines
2. Understand how landforms are related to the processes of erosion, transport and deposition
3. Describe the materials that make up landforms associated with mass wasting, groundwater, streams, glaciers, deserts and shorelines
4. Examine weathering and the formation of soils (this topic may be covered in either G201 or G202 at the discretion of the instructor)
5. Develop an understanding of the kinds and origins or geologic structures (this topic may be covered in either G201 or G202 at the discretion of the instructor)
6. Examine the role of plate tectonics in shaping the surface of the Earth
7. Discuss hazards associated with mass wasting, groundwater, streams, glaciers, deserts and shorelines

Topics to be covered include:

1. Weathering (may be taught in G201 instead)
   a. Mechanical weathering (frost wedging, abrasion, exfoliation)
   b. Chemical weathering (dissolution/solution, oxidation, hydration)
   c. Factors that affect weathering rates
   d. Products of weathering (sand, clay, iron oxides/hydroxides)
   e. Soil structure
   f. Types of soils (pedocals, pedalfers, laterites)
2. Structural Geology (may be taught in G201 instead)
   a. Stress and strain
   b. Folds (syncline, anticline, dome, basin)
   c. Faults (normal, reverse, strike-slip)
   d. Strike and dip
   e. Mountain building and relation to stress
   f. Relationship to plate tectonics
3. Mass Movement
   a. Causes of mass movement (gravity, slope angle, angle of repose, slope composition, vegetation, water)
   b. Types of mass movement (falls, flows, slides, slumps)
   c. Features associated with mass movement (talus, evidence of creep, scarp)
   d. Prevention of mass movement
   e. Triggers (storms, earthquakes, fires, land use)
4. Streams
   a. Hydrologic cycle
   b. Stream topography (drainage basin, divide, tributaries, distributaries, gradient, graded stream)
   c. Stream erosion (base level, abrasion, hydraulic lifting, dissolution, waterfalls)
   d. Drainage patterns (dendritic, radial, rectangular, trellis)
   e. Channels (braided stream, meandering stream, cut bank, point bar, flood plain, terraces)
   f. Transport (competence, capacity, dissolved load, suspended load, bed load, saltation)
   g. Deposition (alluvial fan, delta, channel deposits, flood plains)
5. Groundwater
   a. Groundwater movement (hydraulic gradient, zone of aeration, zone of saturation, water table, porosity, permeability, aquifer, aquiclude, artesian systems)
   b. Springs and geysers
   c. Groundwater pollution/depletion (subsidence, saltwater intrusion, cone of depression)

   d. Karst topography (sinkholes, bind valleys, disappearing streams)
   e. Caves and their features (stalactites, stalagmites, soda straws, columns, dripstone/flowstone)
6. Glaciers
   a. Formation and budget of glaciers (snow to firm to glacial ice, zone of ablation/wastage, zone of accumulation, furn line/snow line)
   b. Classification of glaciers (alpine glaciers, valley glaciers, continental ice sheets)
   c. Glacial flow (plastic deformation and basal slip)
   d. Erosional features (cirque, tarn, horn, arête, u-shaped valley, hanging valley, fjord)
   e. Glacial sediments and sedimentary features (drift, till, erratic, moraine, drumlin, outwash, eskers)
   f. Introduction to ice ages (evidence for past ice ages, possible causes of last ice ages)
7. Deserts
   a. Types of deserts (subtropical created by global air circulation, rain-shadow)
   b. Water erosion and deposition and related features (alluvial fan, pediment, bajada, arroyos, playa)
   c. Wind erosion and deposition and related features (deflation, deflation basins, desert pavement, ventifacts, yardangs, dunes, loess)
8. Coasts
   a. Waves (wavelength, wave base, wave motion, breaker, wave refraction, longshore current, rip current)
   b. Erosion and erosional features (headlands, wave-cut platform, marine terrace, sea cave, sea arch, sea stack)
   c. Deposition and depositional features (beach, spit, berm, baymouth bar, tombolo, groins, jetties, breakwaters, barrier islands)
   d. Relationship to plate tectonics (passive vs. active margins)
   e. Features associated with sea level changes (estuary, fjord)
   f. Causes of sea level changes (glaciers, rate of sea-floor spreading, human-induced global warming)

Department Notes

Physical Geology G202 is intended for both geology majors and non-majors, and is the second term of a year of beginning college geology. Physical Geology is concerned with earth materials and geologic processes acting on the earth. G202 deals mainly with surficial geologic processes. This course can be used to partly fulfill graduation requirements for the Associate Degree, and has been approved for block transfer. The text and materials have been chosen by the faculty and the emphasis of the course will be the viewpoint of the author(s). This includes the concepts of geologic time and the evolution of the Earth.

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

> Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised through observation and experimentation. “Creation science", “Intelligent design” or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

Students are expected to be able to read and comprehend college-level science texts and perform basic mathematical operations in order to successfully complete this course.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	G 203	Course Title:	Historical Geology
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Introduces historical geology which deals with geologic time, fossils, stratigraphic principles, and the geologic history of the North American continent. Includes weekly lab. G201 or G202 or GS106 strongly recommended. Prerequisite: MTH 95 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Use an understanding of sedimentary rock and fossil characterization and classification to infer the past environments recorded by specific geologic areas. 2. Analyze how relative and absolute dating have been used to construct and refine the geological time scale. 3. Use their understanding of earth systems and biological evolution to explain major events in the geologic record. 4. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of earth history identifying areas of congruence and discrepancy. 5. Make field and laboratory based observations and measurements of landscapes, rocks and fossils, use scientific reasoning to interpret these observations and measurements, and compare the results with of current models of earth history identifying areas of congruence and discrepancy. 6. Assess the contributions of historical geology to our evolving understanding of global change and sustainability while placing the development of historical geology in its historical and cultural context.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*

2. CGCC Core Learning Outcomes (CLO):

Through their respective disciplines, CGCC students who earn a degree can:

1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcome #s 1, 2, 3, 5 2) This is a lab science course, where students are required to attend labs in which various content-based experiments are completed. In these labs students often work in groups, discussing the material and are required to write up lab answers for submission to their instructor. Some instructors also implement discussions during lectures to help students communicate various geological concepts the instructor has introduced in lecture to one another. Through assignments such as labs and in class discussions help students gain the knowledge to be able to determine the past geologic environment based on the rocks and fossils present (ex: Shales filled with chrinoid, trilobite and brachiopod fossils would indicate a shallow marine or lagoon environment). Many instructors also implement a final project in which students must either write a paper, make a poster, or present a topic in front of the class. These projects involve researching an area covered in this course in more detail, such as a specific time or event in geologic history (ex: the Cambrian explosion where we saw the evolution of a massive amount of organisms as seen in the fossil record, specifically in the Burgess Shale, the extinction of the dinosaurs – was it only a meteorite impact or did an addition stress help the extinction?)

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcome #s 3, 4, 5 2) Students are asked in lab sessions to identify sedimentary rocks and fossils (mudstone, conglomerate, ferns, gastropods, etc.), once identified, they must determine the environment these samples represent (swamp, desert, river, etc.). Often they are also asked to determine what time period in geologic history the fossils represent. Ex: Devonian, Cambrian, etc. Throughout the course students learn about various dating methods (absolute, radiometric), major events in earth's history, geologic processes important to the rock record (sedimentation, plate tectonics, stratigraphic units, etc.) and how biologic evolution works. The students then use this information to help explain these events seen in geologic history (ex: similar fossils located on either side of large oceans that have been separated by plate tectonics and the separate evolution of these organisms after being separated). Some instructors choose to offer field trips and on these trips students are asked to make observations on their own, then discuss these observations and any data collected in small groups, and then discuss the group consensus with the entire class. Students are often responsible for learning background information about the field site before attending the trip. The final course project many instructors choose to require involve students choosing their own topic related to the course, with some important assignments leading up to the submission of the final draft (Proposal, rough draft, self-reflection, etc.)
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 2. Analyze how relative and absolute dating have been used to construct and refine the geological time scale. 4. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of earth history identifying areas of congruence and discrepancy. 5. Make field and laboratory based observations and measurements of landscapes, rocks and fossils, use scientific reasoning to interpret these observations and measurements, and compare the results with of current models of earth history identifying areas of congruence and discrepancy Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations

6. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome #s 2, 6 Students learn not only the history of the earth, major events and the science behind these discoveries, but how these discoveries and how changes in scientific theories have come about throughout history along with technological advances to aid in determining the age of events (ex: Alfred Wegener and Plate Tectonics along with the magnetic reversals and sea floor topography discovered during & after the world wars, and the use of radiometric isotopes to date the earth and major events in earth's history).
7. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☒ in-depth ☐ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome #s 4, 5, 6 2) When delving into the history of plate tectonics, the discussion comes to the magnetic reversals and ocean floor topography (bathymetry) (submarine warfare) and the technology responsible, along with the use of isotopes for radiometric dating (and atomic weapons). When discussing extinction events in the geologic past, parallels can be made to the present extinctions that have occurred for very similar reasons, climate change (man-made) and species competition.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/8/2018
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/8/2018

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Historical Geology

Course Number: G 203
Transcript Title: Historical Geology
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 95 (/courses/mth-95) or equivalent placement test scores

Prerequisite / Concurrent
WR 121 (/courses/wr-121)

Recommended
G 201 (/courses/g-201) or G 202 (/courses/g-202) or GS 106 (/courses/gs-106)

Course Description

Introduces historical geology which deals with geologic time, fossils, stratigraphic principles, and the geologic history of the North American continent. Includes weekly lab. G201 or G202 or GS106 strongly recommended. Prerequisite: MTH 95 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student who successfully completes this course should be able to:

1. Use an understanding of sedimentary rock and fossil characterization and classification to infer the past environments recorded by specific geologic areas.
2. Analyze how relative and absolute dating have been used to construct and refine the geological time scale.
3. Use their understanding of earth systems and biological evolution to explain major events in the geologic record.
4. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of earth history identifying areas of congruence and discrepancy.
5. Make field and laboratory based observations and measurements of landscapes, rocks and fossils, use scientific reasoning to interpret these observations and measurements, and compare the results with of current models of earth history identifying areas of congruence and discrepancy.
6. Assess the contributions of historical geology to our evolving understanding of global change and sustainability while placing the development of historical geology in its historical and cultural context.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Minimally	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace

	and community. *(Cultural Awareness)*
In-depth	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The methods may include one or more of the following tools: examinations, quizzes, homework assignments, laboratory write-ups, research papers, small group problem solving of questions arising from application of course concepts and concerns to actual experience, oral presentations, or maintenance of a personal work journal.

Course Activities and Design

The material in this course will be presented in a combination of lecture/discussion and laboratory exercises. Other educationally sound methods may be employed such as guest lectures, field trips, research papers, and small group work.

Course Content (Themes, Concepts, Issues and Skills)

1. Discuss the evidence supporting the theory of plate tectonics
2. Explore the geologic and fossil record for each of the major geologic eons and eras
3. Discuss the evidence supporting the theory of evolution
4. Describe and use the geologic time scale
5. Explore the basic concepts involved in radiometric dating
6. Discuss the principles used in relative dating
7. Examine common invertebrate fossils

Topics to be covered include:

1. Plate Tectonics (may be covered in G201)
   a. Alfred Wegener and evidence for continental drift
   b. Magnetic reversals and sea-floor spreading
   c. Using hot spots to determine plate motion
   d. Rifting and the origin of ocean basins
   e. Features associated with each type of plate boundary (divergent, convergent, transform)
   f. Ophiolites
   g. Subduction and related volcanism
   h. Continental collisions and relationship to mountain building
   i. Convection as a driving force of plate tectonics
2. Geologic Time
   a. Uniformitarianism
   b. Principles of relative dating (horizontality, superposition, cross-cutting relations, inclusions, faunal succession)
   c. Unconformities (angular unconformity, disconformity, nonconformity)
   d. Correlation
   e. Radiometric Dating (isotopes, half-life, parent and daughter isotopes)
   f. Other absolute dating techniques (tree-rings, varves, lichenometry)
   g. Geologic time scale
3. Stratigraphy
   a. Stratigraphic units (formation, group, etc.)
   b. Time-rock unit
   c. Evidence for changing sea level
   d. Fossils and evidence for evolution
   e. Index fossils
4. Precambrian
   a. Divisions of Precambrian time (Hadean, Archean, Proterozoic)
   b. Formation of the Earth and Moon as members of the solar system
   c. Speculation on the conditions on the Earth during the Hadean
   d. Archean crust
   e. Origin of continents
   f. Granulite gneiss/greenstone belts

   g. Crustal provinces of North America and assembly of Laurentia and Rodinia during the Proterozoic
   h. Wilson cycles
   i. Early atmosphere
   j. Precambrian ice ages
   k. Origin of Life
   l. Indirect evidence of Life through carbon isotopes in Isua formation ~ 3.8 by ago
   m. Cyanobacteria in 3.5 by Australian cherts
   n. Stromatolites
   o. Prokaryotic vs. eukaryotic cells
   p. Ediacaran Fauna
5. Paleozoic
   a. Divisions of the Paleozoic
   b. Transgressions and Regressions (Sauk, Tippecanoe, Kaskaskia, Absaroka)
   c. Orogenies (Taconic, Caledonian, Acadian, Antler, Ouachita, Allegheny/Hercynian)
   d. Assembly of Pangea
   e. Clastic wedges
   f. Cyclothems
   g. Cambrian Explosion
   h. Burgess shale
   i. Trilobites
   j. Brachiopods vs. Mollusks
   k. Foraminifera
   l. Paleozoic Reefs (archeocyathids, corals, sponges, bryozoans)
   m. Emergence of Fish (jawless, jawed, ray- and lobe-finned)
   n. Emergence of amphibians and reptiles (amniotic egg)
   o. Plants invade land
   p. Great Permian Extinction
6. Mesozoic
   a. Divisions of the Mesozoic
   b. Orogenies (Sonoma, Nevadan, Sevier, Laramide)
   c. Breakup of Pangea
   d. Cretaceous transgression
   e. Dinosaurs, marine reptiles, and flying reptiles
   f. First birds and mammals
   g. Angiosperms (flowering and deciduous plants)
   h. K-T extinction
7. Cenozoic
   a. Divisions of the Cenozoic
   b. Alpine-Himalayan Belt
   c. Laramide orogeny
   d. Colorado Plateau
   e. Basin and Range
   f. Pleistocene ice ages
   g. Radiation of mammals
   h. Human origins

Department Notes

Historical Geology is intended for both geology majors and non-majors, and is the third term of a year of beginning college geology. This course can be used to partly fulfill graduation requirements for the Associate Degree, and has been approved for block transfer. The text and materials have been chosen by the faculty and the emphasis of the course will be the viewpoint of the author(s). This includes the concepts of geologic time and the evolution of the Earth.

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

> Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised

through observation and experimentation. “Creation science", “Intelligent design” or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

Students are expected to be able to read and comprehend college-level science texts and perform basic mathematical operations in order to successfully complete this course.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	G 207	Course Title:	Geology of the Pacific Northwest
Course Credits:	3	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Introduces the regional geology of the Pacific Northwest with emphasis on Oregon geology. Includes basic geologic principles, earth materials and geology of Pacific Northwest provinces. Prior geology experience strongly recommended. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Use an understanding of earth materials and landforms to infer the surficial and internal processes which formed the landscape and underlying geology of the physiographic provinces of the Pacific Northwest. 2. Use an understanding of plate tectonics and surficial processes to unravel the sequence of geologic events which have acted over time to create the physiographic provinces of the Pacific Northwest from diverse geologic terranes. 3. Access earth science information about the Pacific Northwest from a variety of sources, evaluate the quality of this information, and compare this information with current models of the formation and development of the physiographic provinces of the Pacific Northwest identifying areas of congruence and discrepancy. 4. Make field and laboratory based observations and measurements of earth materials and landforms, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of geological processes affecting the Pacific Northwest identifying areas of congruence and discrepancy. 5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by the geological processes which are still shaping the Pacific Northwest both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers. 6. Assess the contributions of physical and historical geology to our evolving understanding of global change and sustainability while placing the development of the geology of the Pacific Northwest in its historical and cultural context.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.

4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcome #s – 1, 2, 3 2) Students are required to complete weekly discussion activities covering the material in the course. This means they must have basic knowledge of the material (through required course reading materials and lecture videos) and will either write discussions in an online discussion forum, or verbally discuss concepts in a face-to-face class. These discussions include topics such as plate tectonics, geologic materials (rocks) and surface processes, volcanism, glaciation, etc. Students are also required to complete weekly written assignments related to the topic covered in the course. For example, comparing and contrasting the formation of the Western Cascades, High Cascades and North Cascades Provinces. Students will also complete a final project covering an aspect of the course they find interesting (such as the formation of a geologic province in the Pacific Northwest. Ex: The Blue Mountains). The project consists of a written research paper and in class presentation. These presentations are completed at the end of the term and students are asked to use the knowledge they have gained throughout the term to aid in the project completion.

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcome #s – 1, 2, 3, 4, 5 2) Students are required to attend field trips in the Pacific Northwest. On these trips students are asked to make observations on their own, then discuss these observations and any data collected in small groups, and then discuss the group consensus with the entire class. Students will also be responsible for learning background information about the field site before attending the trip. The final course project consisting of research paper and presentation, Students are responsible for choosing their own topic and I work with the students on various steps leading up to the presentations to ensure they are on the right track (topic choice, detailed proposal describing what they will discuss, etc.) They are also required to write a self-reflection regarding their progress and final draft of the project (what they could improve, what they did well, etc.) Online and face-to-face discussions also allow for reasoning and evaluation of the material. These discussions begin as an exercise to start thinking outside the box. Each meeting we discuss their ideas when we meet face-to-face, this way students can discuss with one another and myself the questions or concerns they had. Over the first few weeks of the course these discussions in class act as an example of how to solve the problems posed in the discussions.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3 Access earth science information about the Pacific Northwest from a variety of sources, evaluate the quality of this information, and compare this information with current models of the formation and development of the physiographic provinces of the Pacific Northwest identifying areas of congruence and discrepancy. 4 Make field and laboratory based observations and measurements of earth materials and landforms, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of geological processes affecting the Pacific Northwest identifying areas of congruence and discrepancy. 5 Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by the geological processes which are still shaping the Pacific Northwest both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers. Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes

	4. Examinations
4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome #s – 6 Throughout the course students will be responsible for not only learning about the geologic processes and provinces found in the PNW, but will also learn about the Native American Legends correlating to certain features (Bonneville Landslide – Bridge of the Gods, etc.) and the importance of the area to the Native communities for travel, food, shelter and cultural practices.
5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome #s – 5, 6 Students will look at various geologic hazards that exist in the Pacific Northwest due to the geologic history and climate of the area (landslides, coastal erosion, earthquakes, etc.) We will also discuss the preparedness of the PNW for these hazards.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/8/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/8/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Geology of the Pacific Northwest

Course Number: G 207
Transcript Title: Geology of the Pacific N.W.
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 3
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 0
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 65 (http://cgcc.us/courses/mth-65) or equivalent placement test scores

Prerequisite / Concurrent
WR 121 (/courses/wr-121)

Course Description

Introduces the regional geology of the Pacific Northwest with emphasis on Oregon geology. Includes basic geologic principles, earth materials and geology of Pacific Northwest provinces. Prior geology experience strongly recommended. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student who successfully completes this course should be able to:

1. Use an understanding of earth materials and landforms to infer the surficial and internal processes which formed the landscape and underlying geology of the physiographic provinces of the Pacific Northwest.
2. Use an understanding of plate tectonics and surficial processes to unravel the sequence of geologic events which have acted over time to create the physiographic provinces of the Pacific Northwest from diverse geologic terrains.
3. Access earth science information about the Pacific Northwest from a variety of sources, evaluate the quality of this information, and compare this information with current models of the formation and development of the physiographic provinces of the Pacific Northwest identifying areas of congruence and discrepancy.
4. Make field and laboratory based observations and measurements of earth materials and landforms, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of geological processes affecting the Pacific Northwest identifying areas of congruence and discrepancy.
5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by the geological processes which are still shaping the Pacific Northwest both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers.
6. Assess the contributions of physical and historical geology to our evolving understanding of global change and sustainability while placing the development of the geology of the Pacific Northwest in its historical and cultural context.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*

Minimally	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
Minimally	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The methods may include one or more of the following tools: examinations, quizzes, homework assignments, research papers, small group problem solving of questions arising from application of course concepts and concerns to actual experience, oral presentations, or maintenance of a personal work journal.

Course Activities and Design

The material in this course will be presented in a lecture/discussion format. Other educationally sound methods may be employed such as guest lectures, field trips, research papers, and small group work.

Course Content (Themes, Concepts, Issues and Skills)

1. Locate the physiographic provinces of the Pacific Northwest on a map.
2. Explore the rock types and geologic features of each of the physiographic provinces of the Pacific Northwest.
3. Identify and describe the major features of the Earth's surface and interior.
4. Describe the major types of materials that make up the Earth's crust and explain how each material relates to the rock cycle.
5. Describe the geologic processes and features that occur at plate boundaries.
6. Describe the impact of surficial processes on landscapes and geologic materials.
7. Identify the role of volcanism and faulting in the development of the High Lava Plains and the Basin and Range Provinces.
8. Describe the roles of flood-type volcanism, catastrophic flooding, and glaciation in the development of the Columbia Plateau.
9. Compare the geologic histories of the Western Cascades, High Cascades, and North Cascades provinces.
10. Discuss the formation of the Puget Sound and Willamette Valley.
11. Describe the role of accretion and crustal deformation in the development of the Klamath Mountains and Blue Mountains.
12. Describe the role of subduction in the development of the Coastal ranges and the Cascades.
13. List the major divisions of the standard geologic time scale.

Topics to be covered include:

1. Physiographic Provinces
   a. Landscape, climate, and vegetation of the Pacific Northwest
   b. Physiographic provinces of the Pacific Northwest
2. Earth’s Surface Composition and Structure
   a. Regolith vs. bedrock, sources of regolith, variations in depth of regolith
   b. The three rock types; common examples, processes of formation
   c. Occurrence of rocks, cover vs. basement, horizontal vs. folded and faulted strata, types of intrusions, structure of mountain ranges, geologic maps
   d. Rock cycle; internal process vs. surficial processes, energy sources for internal and surficial processes
   e. Continental crust vs. oceanic crust; differences in composition and thickness
3. Historical Geology
   a. Principles of relative and absolute dating
   b. Fossils, faunal succession, stratigraphic correlation
   c. Past environments; sedimentary evidence for past geographies and climates
   d. Geologic time scale
4. Plate Tectonics
   a. Basic idea of plate tectonics, evidence for plate motion, difference between continental and oceanic crust, internal structure of the earth, heat loss
   b. Creation and destruction of oceanic crust at ridges and trenches, age of oceanic crust
   c. Geologic activity and structure at each type of plate boundary (transform, convergent, divergent), cause of earthquakes, volcanism and topography at plate boundaries
   d. Hot spots, hot spot tracks, oceanic vs. continental hot spots, causes of hot spots
5. Coastal Provinces; Coast Ranges and Olympic Mountains
   a. Major topographic features, drainages, rock units and geologic structures
   b. Paleogrography of Tertiary coast
   c. Coastal processes, evidence for uplift

   d. Modern tectonic setting, accretion, evidence for prehistoric subduction zone earthquakes
6. Lowland Provinces; Puget Sound and Willamette Valley
   a. Major topographic features, drainages, rock units and geologic structures
   b. Glaciation and ice age floods
7. The Volcanic Arc: Cascade Mountains Province
   a. Major topographic features, drainages, rock units and geologic structures
   b. Subduction zone volcanism
   c. Tertiary plate tectonic setting of the Pacific Northwest
   d. Old Cascades vs. young Cascades, uplift of Cascade Mountains
   e. Volcanic hazards
8. Extension and Hot Spots: Basin and Range, Columbia River Plateau and High Lava Plain
   a. Major topographic features, drainages, rock units and geologic structures
   b. Timing of basin and range extension, formation of fault block mountains
   c. Flood basalt volcanism vs. silicic volcanism
   d. Hot Spot volcanism
9. Accreted Terranes: Kalamath Mountains, Blue Mountains and North Cascades
   a. Major topographic features, drainages, rock units and geologic structures
   b. Accreation of exotic terranes, stacking of terranes, stitching by plutons
   c. Mesozoic plate tectonic setting of the Pacific Northwest
10. Edge of the Craton: Okanagan Highland and Rocky Mountains
   a. Major topographic features, drainages, rock units and geologic structures
   b. Cratonic sediments, fold and thrust belts
   c. Paleozoic plate tectonic setting of the Pacific Northwest

Department Notes

Geology of the Pacific Northwest (G207) is a one-term introductory course in geology. The purpose of this course is to acquaint the student with basic geologic principles and the general geology of the Pacific Northwest. The emphasis is on the geology of Oregon and Washington. This course can be used to partly fulfill graduation requirements for the Associate Degree, and has been approved for block transfer. The text and materials have been chosen by the faculty and the emphasis of the course will be the viewpoint of the author(s). This includes the geologic time scale and the evolution of the Earth.

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

> Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised through observation and experimentation. “Creation science", “Intelligent design” or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

Students are expected to be able to read and comprehend college-level science texts and perform basic mathematical operations in order to successfully complete this course

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	G 208	Course Title:	Volcanoes and Their Activity
Course Credits:	3	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Covers the origin, activity, products, classification and hazards of volcanoes. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Use an understanding of rock and mineral characterization and classification to infer the igneous processes which formed individual rock and mineral specimens. 2. Analyze the development, scope, and limitations of plate tectonics and utilize plate tectonics to explain the Earth's volcanic activity, and the relationship of this activity to climate change, agriculture, and formation of economic deposits. 3. Access volcano science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of volcanic processes identifying areas of congruence and discrepancy. 4. Make field and laboratory based observations and measurements of volcanic rocks and minerals and/or volcanic landforms, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of volcanic processes identifying areas of congruence and discrepancy. 5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by volcanoes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers. 6. Assess the contributions of volcanology to our evolving understanding of global change and sustainability while placing the development of volcanology in its historical and cultural context.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcome #s 4, 5 2) This is a lecture course, in which some instructors implement discussions during lectures to help students communicate various geological concepts the instructor has introduced in lecture to one another. Through assignments such as labs and in class discussions students gain the knowledge to be able to describe Earth materials and to explain how these materials relate to Volcanoes along with the ability to describe the relationship between volcanoes, earthquakes and plate tectonics. In the course students also learn about various historical volcanic eruptions and are asked to discuss these events along with the impacts on humans. This discussion may take place in a classroom setting, homework, quiz, project or exam setting. Many instructors also implement a final project in which students must either write a paper, make a poster, or present a topic in front of the class. These projects involve researching an area covered in this course in more detail (such as the use of earthquakes to study the interior of the earth).

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcome #s 3,4,5 2) Students are asked to identify igneous rock samples, and then use that information to interpret the geologic process responsible for each (Hawaii style lava flow, explosive Mt. St. Helens eruption, convergent plate boundary, etc.) This helps them also develop an understanding of the origin, activity, structure and types of volcanoes that exist. Students also learn about the scientist and hypothesis leading up to the current evidence to support the theory of plate tectonics, emphasizing the important pieces each scientist contributed and what was missing, and also describe the relationship between plate tectonics and volcanoes. Some instructors choose to offer field trips and on these trips students are asked to make observations on their own, then discuss these observations and any data collected in small groups, and then discuss the group consensus with the entire class. Students are often responsible for learning background information about the field site before attending the trip. The final course project many instructors choose to require involve students choosing their own topic related to the course, with some important assignments leading up to the submission of the final draft (Proposal, rough draft, self-reflection, etc.) Students will also learn about and evaluate the methods used to forecast volcanic predictions, warning signs, monitoring and hazards associated with volcanoes.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 2 Analyze the development, scope, and limitations of plate tectonics and utilize plate tectonics to explain the Earth's volcanic activity, and the relationship of this activity to climate change, agriculture, and formation of economic deposits. 3. Access volcano science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of solid earth processes identifying areas of congruence and discrepancy. 5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by volcanoes and earthquakes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these hazards and risks, and effectively communicate the results of this analysis to their peers. Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations

6. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☐ minimally ☒ not addressed significantly	☒ no changes ☐ revised
7. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome #s 4,5,6 2) Once students have an understanding of the various geologic processes covered in the course (rocks, volcanoes, volcanic hazards, etc.) the class can move forward in lectures and labs to discuss how humans interact with the various earth systems. Volcanic hazard mitigation is an area of overlap. For example, the sediment retention dam built on Mt. St. Helens to stop lahar flows from clogging the Columbia River. Historical volcanic eruptions around the world and their impacts on humans (Destruction of Pompeii, Hawaiian civilizations, Alaskan volcanoes, etc.)

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/8/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/8/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Volcanoes and Their Activity

Course Number: G 208
Transcript Title: Volcanoes and Their Activity
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 3
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 0
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 65 (http://cgcc.us/courses/mth-65) or equivalent placement test scores

Prerequisite / Concurrent
WR 121 (/courses/wr-121)

Course Description

Covers the origin, activity, products, classification and hazards of volcanoes. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student who successfully completes this course should be able to:

1. Use an understanding of rock and mineral characterization and classification to infer the igneous processes which formed individual rock and mineral specimens.
2. Analyze the development, scope, and limitations of plate tectonics and utilize plate tectonics to explain the Earth's volcanic activity, and the relationship of this activity to climate change, agriculture, and formation of economic deposits.
3. Access volcano science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of volcanic processes identifying areas of congruence and discrepancy.
4. Make field and laboratory based observations and measurements of volcanic rocks and minerals and/or volcanic landforms, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of volcanic processes identifying areas of congruence and discrepancy.
5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by volcanoes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers.
6. Assess the contributions of volcanology to our evolving understanding of global change and sustainability while placing the development of volcanology in its historical and cultural context.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Not	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace

Addressed	and community. *(Cultural Awareness)*
Minimally	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The methods may include one or more of the following tools: examinations, quizzes, homework assignments, research papers, small group problem solving of questions arising from application of course concepts and concerns to actual experience, oral presentations, or maintenance of a personal work journal.

Course Activities and Design

The material in this course will be presented in a lecture/discussion format. Other educationally sound methods may be employed such as guest lectures, field trips, research papers, and small group work.

Course Content (Themes, Concepts, Issues and Skills)

1. Describe the relationship of volcanoes to plate boundaries.
2. Classify the types of rocks created by volcanic processes.
3. Contrast pyroclastic and effusive eruption styles.
4. Examine the effect of silica content on eruption style.
5. Discuss a number of historical volcanic eruptions and determine the major cause of human destruction for each case.
6. Explore the methods used to forecast volcanic eruptions.
7. Classify the features that occur in volcanic landscapes.
8. Define the different kinds of plutons.
9. Discuss the hazards associated with the Cascade volcanoes.
10. Define the following terms: shield volcano, composite volcano, cinder cone, lahar, pyroclastic flow, pahoehoe, aa.
11. Discuss the effects of volcanic eruptions on climate.

Topics to be covered include:

1. Global Volcanic Activity
   a. Number and geographic distribution of active volcanoes
   b. Major historic volcanic eruptions and their impact on society (e.g. Tambora, Krakatau, Vesuvius, Mount Saint Helens)
   c. Active vs. dormant vs. extinct volcanoes
2. Volcanic Eruptions
   a. Different styles of volcanic eruptions: effusive vs. explosive, Icelandic, Hawaiian, Strombolian, Vulcanian, Plinian and caldera type; lava flows, lava domes, eruption columns, pyroclastic flows, lahars, lateral blasts, landslides
   b. Phreatic eruptions vs. magmatic eruptions; submarine eruptions; sub glacial eruptions
   c. Sizes of volcanic eruption, VEI
3. Volcanic Features
   a. Volcanic systems: volcanoes, vents, fissures and magma chambers
   b. Types of volcanoes: cinder cones, domes, shield volcanoes, stratovolcanoes, lava plateaus, calderas, maars, tuff rings
   c. Intrusive features; stocks, necks, cyptodomes, sills, dikes, plutons, batholiths
   d. Volcanic features in the Portland area, Cascades, Columbia River Basin and eastern Oregon
4. Products of Volcanic Eruptions
   a. Chemistry of magmas: major elements and volatiles; physical properties of magmas: freezing temperature and viscosity; relationships between magma chemistry and physical properties
   b. Relationship between cooling rate and igneous rock textures
   c. Description and classification of igneous extrusive rocks: rhyolite, dacite, andesite, basalt, scoria, pumice, obsidian, vesicles, porphyritic texture
   d. Description and classification of igneous intrusive rocks: granite, granodiorite, diorite, gabbro, peridotite
   e. Lava flow features: pahoehoe vs. aa, lava tubes, cooling columns, tree casts, pillows, palagonite breccias etc.; identifying lava flow tops and bottoms in the field
   f. Pyroclastic products: ash, lapilli, cinders, bombs, tuffs, welded tuffs, flow tuffs
   g. Gases: types, quantity; sources: meteoric vs. magmatic
   h. Lahars: dynamics, distance and speed of flow, temperature; causes
   i. Pyroclastic flows: dynamics, distance and speed of flow, temperature, deposits, causes
   j. Lateral blasts: dynamics, distance and speed of flow, temperature, deposits, causes

k. Landslides: dynamics, distance and speed of flow, temperature, deposits, causes

5. Causes of Volcanic Eruptions
   a. Migration of magmas to shallow magma chambers, cooling and differentiation of magma chambers, differences between mafic and felsic magma chambers
   b. Role of exsolved gasses in driving volcanic eruptions
6. Plate Tectonics and Volcanism
   a. Basic idea of plate tectonics, evidence for plate motion, difference between continental and oceanic crust, internal structure of the earth, heat loss and plate tectonics
   b. Creation of oceanic crust at mid ocean ridges, volcanism and hydrothermal activity at mid ocean ridges, cause of melting at mid ocean ridges, types of magmas produced
   c. Destruction of oceanic crust at subduction zones, volcanism associated with subduction zones, cause of melting at subduction zones, types of magmas produced
   d. Hot spots and associated volcanism in oceanic and continental settings, cause of melting, types of magma produced,
   e. Relationships between tectonic setting, cause of melting, magma type produced and eruption style
7. Living with Volcanoes
   a. Volcanic hazards: lava flows, volcanic gases, eruption columns, ash falls, pyroclastic flows, lahars, landslides, lateral blasts
   b. Volcanic hazard mapping: use of volcanic deposits to determine past eruptive behavior and frequency of volcanoes, identifying hazard zones
   c. Preparing for volcanic eruptions; personal disaster kits, volcano monitoring, evacuation plans, effective communication of scientific information, education of public
   d. Predicting volcanic eruptions: monitoring precursors (earthquakes, deformation, gas emissions): possible triggers
   e. Case studies of volcanic eruptions including successful (e.g. Mt. Pinatubo) and unsuccessful (e.g. Nevado del Ruiz) societal responses with an emphasis on Cascade volcanoes
   f. Resources associated with volcanoes: geothermal energy, hot springs, tourism, volcanic soils, mineral deposits, diamonds
8. Global Impacts of Volcanism
   a. Climate changes associated with historic eruptions, causes of these changes
   b. Flood basalt volcanism: Columbia River Basalts and other large igneous provinces
   c. Possible links between volcanism and mass extinctions
   d. Volcanic degassing as a possible source of the atmosphere and ocean

Department Notes

Volcanoes and Their Activity (G208) is a one-term introductory course in volcanology, which is a branch of the science of geology. The student will develop an understanding of the types, origin, activity, products, and hazards of volcanoes. This course can be used to partly fulfill graduation requirements for the Associate Degree, and has been approved for block transfer. The text and materials have been chosen by the faculty and the emphasis of the course will be the viewpoint of the author(s). This includes the geologic time scale and the evolution of the Earth.

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

> Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised through observation and experimentation. “Creation science", “Intelligent design” or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

Students are expected to be able to read and comprehend college-level science texts and perform basic mathematical operations in order to successfully complete this course.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	GS 106	Course Title:	Physical Science (Geology)
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Covers minerals, rocks, volcanism, earthquakes, plate tectonics, erosion and deposition by wind, glaciers and streams, weathering, fossils and geologic history. Includes weekly lab. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Use an understanding of the rock cycle, plate tectonics and surface processes to explain how the Earth's surface wears away and is renewed. 2. Use an understanding of geologic dating methods and the interpretation of geologic deposits to explain how geologists reconstruct the history of the Earth. 3. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of geologic processes identifying areas of congruence and discrepancy. 4. Make field and laboratory based observations and measurements of earth materials and landscapes, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of geologic processes identifying areas of congruence and discrepancy. 5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by geologic processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers. 6. Assess the contributions of geology to our evolving understanding of global change and sustainability while placing the development of geology in its historical and cultural context.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1. Outcome #s: 1, 2, 3, 4 2. This is a lab science course, where students are required to attend labs in which various content-based experiments are completed. In these labs students often work in groups, discussing the material and are required to write up lab answers for submission to their instructor. Some instructors also implement discussions during lectures to help students communicate various geological concepts the instructor has introduced in lecture to one another. Through assignments such as labs and in class discussions help students gain the knowledge to be able to describe Earth processes and to explain how to interpret what processes shaped the landscape based on what geological landforms are present (ex: sinkhole formation as a result of groundwater erosion via dissolution of limestone) or to be able to describe Earth materials and to explain how these materials form and are related to one another. Students also take this knowledge to explain how geologists piece together the history of the Earth along with major events. Many instructors also implement a final project in which students must either write a paper, make a poster, or present a topic in front of the class. These projects involve researching an area covered in this course in more detail, such as the risks posed by mass movement (landslides), flooding, groundwater erosion (sinkholes), volcanic eruptions, earthquakes, etc. Often times in class discussions occur relating these hazards and concepts to the student's personal lives (earthquake hazards and preparedness, landslide signs and triggers, etc.)

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1. Outcome #s: 3, 4, 5 2. Students are asked in lab sessions to identify mineral and rock samples, and then use that information to interpret how these materials are not only related to each other what they tell us about the history of a location, but how they relate to the landscape they are found in. Ex: Identifying the volcanic rock Basalt, determining that it was form from a calm eruption and inferring that the basalts found in the Gorge formed in a very similar way. Students also learn about the scientist and hypothesis leading up to the current evidence to support the theory of plate tectonics, emphasizing the important pieces each scientist contributed and what was missing. They learn about the various surface processes that exist on Earth, and are asked to discuss what hazards can be produced along with basic ideas to mitigate these events. Some instructors choose to offer field trips and on these trips students are asked to make observations on their own, then discuss these observations and any data collected in small groups, and then discuss the group consensus with the entire class. Students are often responsible for learning background information about the field site before attending the trip. The final course project many instructors choose to require involve students choosing their own topic related to the course, with some important assignments leading up to the submission of the final draft (Proposal, rough draft, self-reflection, etc.)
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 3. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of geologic processes identifying areas of congruence and discrepancy. 4. Make field and laboratory based observations and measurements of earth materials and landscapes, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of geologic processes identifying areas of congruence and discrepancy. 5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by geologic processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers. 1) Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations

6. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1. Outcome #s: 5, 6 2. This course covers earthquakes and volcanoes, two geological hazards impacting not only the United States, but almost every country on the planet. Students are often provided with various examples of recent and historically significant events for study in lecture and lab to introduce not only the mechanisms of the event, but also the precursor signs (if any), warning systems that exist and the aftermath. Some common events include; the 1980 eruption of Mt. St. Helens, the impending Cascadia Subduction zone earthquake and tsunami, Oso, WA landslide, Florida sinkholes, shrinking of the Aral Sea & Lake Chad, etc. The Pacific Northwest, and The Columbia River Gorge has great Native American legends to describe how the native peoples viewed the formation of various landforms in the gorge (Bonneville Landslides Complex, Mt. Hood, etc.)
7. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome #s: 4, 5, 6 2) Once students have an understanding of the various geologic processes covered in the course (rocks, minerals, earthquakes, volcanoes, streams, mass wasting, glaciers etc.) the class can move forward in lectures and labs to discuss how humans interact with the various earth systems. Weathering and erosion is a common area of overlap, with human activities such as road and building construction erosion can be amplified in some cases and decreased in others, volcanic and earthquake hazard mitigation is another area of overlap (ex: sediment retention dam built on Mt. St. Helens to stop lahar flows from clogging the Columbia River). Building locations to decrease earthquake damage, Flood zone maps for various rivers, should these maps be revised due to climate change and sea level rise? Disappearance of glaciers and ice sheets due to global climate change, shrinking of desert lakes and seas due to both climate change and increased human use for irrigation, etc.

Section # 4 Department Review

This proposal has been reviewed at the Director level and approved for submission.

Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	**Email**	**Date**
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. Refer to the curriculum office website for the

Physical Science (Geology)

Course Number: GS 106
Transcript Title: Physical Science (Geology)
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 65 (http://cgcc.us/courses/mth-65) or equivalent placement test scores

Prerequisite / Concurrent
WR 121 (/courses/wr-121)

Course Description

Covers minerals, rocks, volcanism, earthquakes, plate tectonics, erosion and deposition by wind, glaciers and streams, weathering, fossils and geologic history. Includes weekly lab. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student who successfully completes this course should be able to:

1. Use an understanding of the rock cycle, plate tectonics and surface processes to explain how the Earth's surface wears away and is renewed.
2. Use an understanding of geologic dating methods and the interpretation of geologic deposits to explain how geologists reconstruct the history of the Earth.
3. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of geologic processes identifying areas of congruence and discrepancy.
4. Make field and laboratory based observations and measurements of earth materials and landscapes, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of geologic processes identifying areas of congruence and discrepancy.
5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by geologic processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers.
6. Assess the contributions of geology to our evolving understanding of global change and sustainability while placing the development of geology in its historical and cultural context.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Minimally	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*

Minimally	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

The instructor will choose from the following methods of assessment: exams, quizzes, lab exercises, written reports, oral presentations, group projects, class participation, homework assignments, and field trips. The instructor shall detail the methods being used to the students at the beginning of the course.

Course Activities and Design

The laboratory is not separated from the lecture but will usually be correlated in such a way as to reinforce the materials being discussed in the lecture session. It is necessary for the student to successfully complete the laboratory section of the course in order to earn a grade for the course. Math will occasionally be used for solving simple ratio problems, as will be the use of maps and graphs.

Course Content (Themes, Concepts, Issues and Skills)

(NOTE: the topics may be chosen in any order by the instructor)

- Explain rock and mineral classification and identification.
- Explain how these materials form and how they are related to each other.
- Describe the major types of landscapes that make up the earth's surface and how they are formed.
- Describe the earth's internal structure and the processes shaping it.
- Explain the relationship between the processes that shape landscapes and those that shape internal structure.
- Explain the relationship between the processes that shape landscapes and structure and those that form crustal materials.
- Explain how geologic histories are constructed.
- Identify the major parts of and events in the geologic calendar.
- Discuss the personal and societal relevance of these topics.

Topics to be covered include

Geologic materials:

- Minerals - Properties, classification, and chemistry
- Igneous rocks - Identification and classification
- Magmas and magmatic cooling - Volcanism and intrusion
- Sediments and weathering
- Sedimentary rocks - Identification and classification
- Lithification
- Metamorphic rocks - Identification and classification
- Metamorphism - settings and processes

Landscapes and landscaping processes:

- Global topography and structure
- Topographic and geologic maps
- Mass wasting and related landscapes
- Streams and related landscapes
- Glacial systems and related landscapes
- Groundwater systems and related landscapes
- Crustal deformation and related structures (folds and faults)
- Earthquakes and plate tectonics

Historical geology:

- Fossils and stratigraphy
- Relative and absolute dating techniques
- Geologic time scale; major events in Earth history

Department Notes

The purpose of this course is to gain knowledge and appreciation of geology through lecture/discussion sessions and laboratory experiences. It is a one-term survey course that may be included as part of the years sequence in physical science for college transfer credit.
The course will have as many of the following components as feasible: lectures, discussions, lab activities, videos, slides, CDs, live television, field trips, and computer-aided instruction.

The text and materials for the course have been chosen by the faculty, and viewpoints shall be that of the author(s). This includes the topics of relativity, the geologic time scale, evolution of the Earth and its atmosphere, the solar system, the galaxy, and the universe.

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

> Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised through observation and experimentation. "Creation science", "Intelligent design" or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	GS 107	Course Title:	Physical Science (Astronomy)
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Surveys astronomy to include historical development of the universe, earth as a planet, earth's moon, planets of the solar system, the sun, stars and galaxies. Includes weekly lab. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Use an understanding of solar system models to explain the motions and phases of astronomical objects visible to the naked eye in the night sky. 2. Use an understanding of planetary, stellar, galactic and universe scale astronomical processes to assess the possibility of life existing elsewhere in the universe. 3. Access space science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of astronomical processes identifying areas of congruence and discrepancy. 4. Make field and laboratory based observations and measurements of astronomical phenomena, use scientific reasoning to interpret these observations and measurements, and compare the results with current astronomical models identifying areas of congruence and discrepancy. 5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by astronomical processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers. 6. Assess the contributions of astronomy to our evolving understanding of global change and sustainability while placing the development of astronomy in its historical and cultural context.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1. Outcome #s: 1, 2, 3, 4 2. This is a lab science course, where students are required to attend labs in which various content-based experiments are completed. In these labs students often work in groups, discussing the material and are required to write up lab answers for submission to their instructor. Some instructors also implement discussions during lectures to help students communicate various geological concepts the instructor has introduced in lecture to one another. Through assignments such as labs and in class discussions help students gain the knowledge to be able to describe astronomical processes and to explain the motions of astronomical objects and to explore the idea of life elsewhere in the universe (ex: Experiments involving light properties and how to determine motion of distant stars, etc.) Many instructors also implement a final project in which students must write a paper, make a poster, or present a topic in front of the class. These projects involve researching an area covered in this course in more detail, such as new discoveries in astronomy, meteorites, comets and asteroids that exist near Earth's orbit (or those that have struck the Earth in the geologic past).

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1. Outcome #s: 3, 4, 5 2. Students are asked in lab sessions to conduct experiments involving properties of light, astronomical distance and size scales, evolution of stars, properties of our solar system, etc. and then use that information to interpret the evolution and formation of our galaxy, solar system and understanding of the current theories related to astronomy. Students also learn about the history of astronomy, and how various milestones came about in the field as well as areas of uncertainty and problems as well as successes that may exist in astronomical models. Some instructors choose to offer field trips or require evening star gazing assignments to observe the night sky. These observations are then discussed in class or on the trips and any data collected in small groups, and then discuss the group consensus with the entire class. Students are often responsible for learning background information about the field site before attending the trip. The final course project many instructors choose to require involve students choosing their own topic related to the course, with some important assignments leading up to the submission of the final draft (Proposal, rough draft, self-reflection, etc.)
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 2 Use an understanding of planetary, stellar, galactic and universe scale astronomical processes to assess the possibility of life existing elsewhere in the universe. 3. Access space science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of astronomical processes identifying areas of congruence and discrepancy. 4. Make field and laboratory based observations and measurements of astronomical phenomena, use scientific reasoning to interpret these observations and measurements, and compare the results with current astronomical models identifying areas of congruence and discrepancy. 5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by astronomical processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers. Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations

6. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1. Outcome #s: 5, 6 2. This course covers the history of astronomy, including past ideas, theories, developments, struggles and conflicts with the current ideas of the time.
7. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome #s: 4, 5, 6 2) The study of astronomy is not only about what already exists in space, but also how we study space. Students learn about how humans have studied space over time and what we have learned from this study, as well as from our exploration of space. We have developed satellites that give us all sorts of data to study the Earth, and to improve our understanding of the natural world. The data collected helps with weather observations and storm predictions (most importantly hurricanes!) We can see and therefore understand various Earth processes in more detail with much of the technology developed to study and explore space – so many new ideas and doors have been opened as a result.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Physical Science (Astronomy)

Course Number: GS 107
Transcript Title: Physical Science (Astronomy)
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 65 (http://cgcc.us/courses/mth-65) or equivalent placement test scores

Prerequisite / Concurrent
WR 121 (/courses/wr-121)

Course Description

Surveys astronomy to include historical development of the universe, earth as a planet, earth's moon, planets of the solar system, the sun, stars and galaxies. Includes weekly lab. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student who successfully completes this course should be able to:

1. Use an understanding of solar system models to explain the motions and phases of astronomical objects visible to the naked eye in the night sky.
2. Use an understanding of planetary, stellar, galactic and universe scale astronomical processes to assess the possibility of life existing elsewhere in the universe.
3. Access space science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of astronomical processes identifying areas of congruence and discrepancy.
4. Make field and laboratory based observations and measurements of astronomical phenomena, use scientific reasoning to interpret these observations and measurements, and compare the results with current astronomical models identifying areas of congruence and discrepancy.
5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by astronomical processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers.
6. Assess the contributions of astronomy to our evolving understanding of global change and sustainability while placing the development of astronomy in its historical and cultural context.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Not Addressed	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*

Minimally	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The methods include one or more of the following tools: on-line quizzes, in-class examinations, homework assignments, and laboratory assignments.

Course Activities and Design

The material in this course will be presented through televised video with accompanying reading assignments, in three laboratories and a required orientation session, and through supplemental computer activities. Students will be encouraged to work together on an observing project, but will be required to demonstrate mastery of the course content by taking in-class exams. Alternatively, the course can be a standard, in-class course in the same design as GS 108 or GS 106.

Course Content (Themes, Concepts, Issues and Skills)

1. Describe astronomical distance and size scales.
2. Describe the apparent motion of astronomical objects (planets, stars) caused by the rotation and revolution of the Earth.
3. Describe the historical development of astronomy.
4. Describe the properties of light.
5. Describe the properties of the sun and other stars.
6. Describe how stars evolve.
7. Describe the properties of the Milky Way galaxy and other galaxies.
8. Describe the global properties of various planets in the solar system, including the Earth and it’s moon.
9. Describe the properties of meteorites, comets, and asteroids.

Department Notes

The text and materials have been chosen by the faculty and the emphasis of the course will be the viewpoint of the author(s). This includes relativity, the geologic time scale, and the evolution of the Earth, our solar system, our galaxy, and the universe at large.

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

> Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised through observation and experimentation. "Creation science", "Intelligent design" or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

Students are expected to be able to read and comprehend college-level science texts and perform basic mathematical operations to successfully complete this course.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	GS 108	Course Title:	Physical Science (Oceanography)
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Includes the chemical, biological, physical and geological nature of the oceans. Includes weekly lab. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.		
Course Outcomes:	1. Use an understanding of waves, tides, and coastal processes to explain the development and functioning of beaches, shorelines and estuaries. 2. Use an understanding of ocean structure and processes to explain the spatial and temporal distribution of biological productivity in the ocean. 3. Access ocean science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of ocean processes identifying areas of congruence and discrepancy. 4. Make field and laboratory based observations and measurements of ocean materials and marine processes, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of ocean processes identifying areas of congruence and discrepancy. 5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by ocean processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers. 6. Assess the contributions of oceanography to our evolving understanding of global change and sustainability while placing the development of oceanography in its historical and cultural context.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**

   Through their respective disciplines, CGCC students who earn a degree can:

   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1. Outcome #s: 1, 2, 3, 4 2. This is a lab science course, where students are required to attend labs in which various content-based experiments are completed. In these labs students often work in groups, discussing the material and are required to write up lab answers for submission to their instructor. Some instructors also implement discussions during lectures to help students communicate various geological concepts the instructor has introduced in lecture to one another. Through assignments such as labs and in class discussions help students gain the knowledge to be able to describe Earth & ocean processes and to explain how to interpret what processes shaped the landscape based on what geological landforms are present (ex: Rocky coastlines with headlands as a result of plate tectonic activity uplifting the coastline) or to be able to explain the distribution of marine life in the oceans based on salinity, ocean currents, substrate, etc. Many instructors also implement a final project in which students must either write a paper, make a poster, or present a topic in front of the class. These projects involve researching an area covered in this course in more detail, such as the different marine habitats and zones that exist in the ocean and what organisms live in each, coastal hazards such as landslides, earthquakes, storm surges, etc. Often times in class discussions occur relating these hazards and concepts to the students personal lives (earthquake hazards and preparedness, marine life & our impacts on the ocean habitats via climate change and pollution, etc.)

2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1. Outcome #s: 3, 4, 5 2. Students are asked in lab sessions to identify rock samples, conduct experiments involving waves, shorelines, salinity, currents, plate tectonics and then use that information to interpret how these materials and process have shaped the coastline and the ocean basins They use information learned in lectures, the textbook and other course materials (websites, lab experiments, etc.) to conduct these interpretations. (ex: transport and erosion of sediment via long-shore drift and the benefits and problems with hard coastal stabilization like jetties and riprap.) Students also learn about the impacts humans have on the oceans and how these impacts can not only be detrimental to the organisms living in the oceans, but to humans and other terrestrial organisms. For example, increased CO2 emissions and the resulting global temperature increase. These increases have been absorbed into the oceans in the form of increased sea surface temperatures and increased acidity due to the absorption of CO2 into the oceans. Some instructors choose to offer field trips and on these trips students are asked to make observations on their own, then discuss these observations and any data collected in small groups, and then discuss the group consensus with the entire class. Students are often responsible for learning background information about the field site before attending the trip. The final course project many instructors choose to require involve students choosing their own topic related to the course, with some important assignments leading up to the submission of the final draft (Proposal, rough draft, self reflection, etc.)
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 4. Access ocean science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of ocean processes identifying areas of congruence and discrepancy. 5. Make field and laboratory based observations and measurements of ocean materials and marine processes, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of ocean processes identifying areas of congruence and discrepancy. 6. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by ocean processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers. Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities:

	1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
7. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1. Outcome #s: 5, 6 2. This course addresses human interaction with the ocean in both positive and negative ways via conservation, fishing regulations, pollution, climate change and tsunamis. Occasionally instructors choose to use examples of these interactions not only from the US but from other parts of the world (Sumatra's and Japan's most recent earthquake and tsunami, degradation of the Great Barrier Reef, etc.)
8. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome #s: 4, 5, 6 2) As stated previously, this course explores the interaction between humans and the oceans. Various topics include coastal erosion due to increased storm intensity and sea level rise due to climate change and the trapping of sediments along rivers by dams, pollution of the oceans from various sources (ocean dumping of garbage, sewage, agricultural runoff, temperature increases and salinity increases, etc.) Students often choose these topics for their end of term projects and discuss not only the mechanism responsible, but also ways we are currently cleaning up the oceans along with research being done to find new techniques (ex: The Great Pacific Garbage Patch) Students examine biologic food chains in the oceans and the impacts of over fishing one population or the impacts of invasive species. This can also be expanded into bioaccumulation and bio-magnification of toxins in marine organisms such as Tuna.

Section # 4 Department Review

This proposal has been reviewed at the Director level and approved for submission.

Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	**Email**	**Date**
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Physical Science (Oceanography)

Course Number: GS 108
Transcript Title: Phys Science (Oceanography)
Created: September 1, 2012
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 65 (http://cgcc.us/courses/mth-65) or equivalent placement test scores

Prerequisite / Concurrent
WR 121 (/courses/wr-121)

Course Description

Includes the chemical, biological, physical and geological nature of the oceans. Includes weekly lab. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

A student who successfully completes this course should be able to:

1. Use an understanding of waves, tides, and coastal processes to explain the development and functioning of beaches, shorelines and estuaries.
2. Use an understanding of ocean structure and processes to explain the spatial and temporal distribution of biological productivity in the ocean.
3. Access ocean science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of ocean processes identifying areas of congruence and discrepancy.
4. Make field and laboratory based observations and measurements of ocean materials and marine processes, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of ocean processes identifying areas of congruence and discrepancy.
5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by ocean processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers.
6. Assess the contributions of oceanography to our evolving understanding of global change and sustainability while placing the development of oceanography in its historical and cultural context.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Minimally	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*
	5. Recognize the consequences of human activity upon our

Minimally	social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

The instructor will choose from the following methods of assessment: exams, quizzes, lab exercises, written reports, oral reports, group projects, class participation, homework assignments, and field trips. The instructor shall detail the methods to be used to the students at the beginning of the class.

Course Activities and Design

The laboratory is not separate from the lecture, but will usually be correlated in such a way as to reinforce the materials being discussed in the lecture section. It is necessary for the student to successfully complete the laboratory portion of the course in order to earn a grade in the course. Math will be used to solve ratio, percentage, and simple algebraic problems. Also included are the designing, reading, and interpreting of graphs.

Course Content (Themes, Concepts, Issues and Skills)

(Note: topics may be selected in any order by each instructor)

- Explain the nature and history of oceanography as a science.
- Discuss the structure and evolution of the earth's ocean basins and coastlines.
- Discuss the mechanics of waves, currents, and tides.
- Describe the major chemical and physical properties of seawater and the interaction of these properties.
- Discuss marine biology in terms of habitats and zones, life in the oceans.
- Discuss how humans impact the marine environment in terms of resources from the sea and marine pollution.
- Other topics as desired by the instructor.

Topics to be covered include:

- Oceanography as a science:
  - The scientific method as it applies to oceanography
  - Major divisions of oceanography
  - Brief history of oceanography
- Marine geology:
  - Major seafloor features and bathymetric mapping.
  - The earth's internal structure and structure of oceanic crust.
  - Surficial processes related to the oceans - Mass wasting, stream flow, groundwater, glaciers, wind, waves, and ocean currents.
  - Tectonic processes related to the oceans - Volcanism, crustal deformation, and plate tectonics.
  - Major rock types.
  - Seafloor sediment - Classification, formation, and distribution.
- Physical oceanography:
  - Seawater - Physical properties, measurement, and geography.
  - Surface and deep ocean currents - Mechanics, measurement, and geography.
  - Waves - Basics physics and types.
  - Tides - Mechanics, measurement, and prediction.
- Marine biology:
  - Marine organisms and adaptation.
  - Marine organisms and ecological relationships - Food webs, energy flow, and populations.
  - Marine environments - Types, physical conditions, inhabitants and adaptations, ecological relationships.
  - Human impact -The impact of resource extraction from and contamination of marine environments.

Department Notes

The purpose of this course is to develop an understanding of the chemical, biological, physical, and geological processes related to the ocean, and include historical perspectives. It is a one-term survey course that may be included as part of the year's sequence in physical science for college transfer credit. The course will have as many of the following components as feasible: lectures, discussions, lab activities, videos, CDs, slides, and computer aided instruction. It is necessary to successfully complete the lab part of the course in order to pass the course.

The text and materials have been chosen by the faculty and the emphasis of the course will be the viewpoint of the author(s). This includes relativity, the geologic time scale, and the evolution of the Earth, our solar system, our galaxy, and the universe at large.

Columbia Gorge Community College Science Department stands by the following statement about regarding science instruction:

> Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological evolution and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised

through observation and experimentation. "Creation science", "Intelligent design" or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F. 2d 1004).

The Science Department at Columbia Gorge Community College therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

Students are expected to be able to read and comprehend college-level science texts and perform basic mathematical operations to successfully complete this course.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Science	Submitter Name: Phone: Email:	Dan Ropek
Course Prefix and Number:	GS 109	Course Title:	Physical Science (Meteorology)
Course Credits:	4	Gen Ed Category:	☐ Arts and Letters ☐ Social Science ☒ Science, Comp. Sci., and Math
Course Description:	Covers characteristics of our atmosphere, air pressure and winds, atmospheric moisture, large air masses, violent storms, forecasting, the effect of oceans on weather, and climates. Includes weekly lab. Prerequisite: WR 115, RD 115 and MTH 65 or equivalent placement test scores. Audit available.		
Course Outcomes:	1. Use an understanding of atmospheric processes to explain the practice of weather prediction 2. Use an understanding of atmospheric structure and global circulation to explain the different climates found on Earth 3. Access atmosphere science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of meteorological processes identifying areas of congruence and discrepancy 4. Make field and laboratory based observations and measurements of the atmosphere, weather, and climate, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of meteorological processes identifying areas of congruence and discrepancy 5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by meteorological processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers 6. Assess the contributions of meteorology to our evolving understanding of global change and sustainability while placing the development of meteorology in its historical and cultural context		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**
   Through their respective disciplines, CGCC students who earn a degree can:
   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcome numbers 1, 2, 5 in previous section. 2) Students are required to complete a course group project and presentation where each student is responsible for speaking in front of the class and each student is required to ask questions of each presenter. These presentations are completed at the end of the term and students are asked to use the knowledge they have gained throughout the term to aid in the project completion. Students are also required to complete discussion activities online and comment on one another. Students work in groups on labs where they discuss the material, conduct experiments and record answers to submit. Questions on final exam essay cover outcome numbers 1 & 2
2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	☒ no changes ☐ revised 1) Outcome numbers 3, 5 & 6 2) Students are required to complete a course group project and presentation where each student is responsible for their own portion of the project, research and speech. They are also required to write a self-reflection regarding their project. I work with the students on various steps leading up to the presentations to ensure they are on the right track (topic choice, detailed proposal describing what they will discuss, etc.) Students are also required to complete discussion activities online and comment on one another. These discussions begin as an exercise to start thinking outside the box. Each week we discuss their ideas in lab, this way

	students can discuss with one another and myself the questions or concerns they had. Over the first few weeks of the course these discussions in class act as an example of how to solve the problems posed in the discussions (ex: weather forecasting & predicting storms such as tornados, hurricanes and the weather patterns of the Pacific Northwest).
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☒ in-depth ☐ minimally ☐ not addressed significantly	Outcomes: 4. Access atmosphere science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of meteorological processes identifying areas of congruence and discrepancy 5. Make field and laboratory based observations and measurements of the atmosphere, weather, and climate, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of meteorological processes identifying areas of congruence and discrepancy 6. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by meteorological processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers Course Content: This CLO is addressed in depth because both lecture and laboratory utilize data to discuss and process the course content. This content may be assessed utilizing one or more of the following activities: 1. Homework assignments 2. Applications of laboratory experiences 3. Quizzes 4. Examinations
7. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome number 6 2) When the course reaches the later weeks of content, we discuss weather hazards such as tornados, hurricanes, climate zones, etc. We also compare what we are familiar with here, to what is seen elsewhere in the world in terms of monitoring, warning and preparation. We also touch on the climate & weather differences seen in Oregon. Students are also asked to investigate how the topic they chose is seen or dealt with differently by other cultures.
8. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☒ minimally ☐ not addressed significantly	☒ no changes ☐ revised 1) Outcome number 5, 6 2) When we start discussing storm systems and climate in the course, the human impact on the atmosphere and weather is addressed. Once students have an understanding of the different storm systems, we begin to investigate how these storms have changed over time – in intensity and frequency. (ex: hurricanes & tornados) Students have already learned about the basics of weather such as temperature, solar radiation, air pressure and

	precipitation and they are asked in the discussions and labs in these later weeks, how changing one aspect of the atmosphere can throw off the entire system. We also discuss in the lectures and discussions what we can do to mitigate these problems through conservation, modeling, planning and warning systems.

Section # 4 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Dan Ropek	dropek@cgcc.edu	2/12/18
Department Director	Email	Date
Mary Kramer	mkramer@cgcc.edu	2/12/18

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

Physical Science (Meteorology)

Course Number: GS 109
Transcript Title: Physical Science (Meteorology)
Created: December 12, 2013
Updated: June 6, 2017
Total Credits: 4
Lecture Hours: 30
Lecture / Lab Hours: 0
Lab Hours: 30
Satisfies Cultural Literacy requirement: No
Satisfies General Education requirement: Yes
Grading options: A-F (default), P-NP, audit
Repeats available for credit: 0

Prerequisites
MTH 65 (http://www.cgcc.edu/courses/mth-65) or equivalent placement test scores.

Prerequisite / Concurrent
WR 121 (/courses/wr-121)

Course Description

Covers characteristics of our atmosphere, air pressure and winds, atmospheric moisture, large air masses, violent storms, forecasting, the effect of oceans on weather, and climates. Includes weekly lab. Prerequisite: MTH 65 or equivalent placement test scores. Prerequisite/concurrent: WR 121. Audit available.

Intended Outcomes

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

1. Use an understanding of atmospheric processes to explain the practice of weather prediction.
2. Use an understanding of atmospheric structure and global circulation to explain the different climates found on Earth.
3. Access atmosphere science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of meteorological processes identifying areas of congruence and discrepancy.
4. Make field and laboratory based observations and measurements of the atmosphere, weather, and climate, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of meteorological processes identifying areas of congruence and discrepancey.
5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by meteorological processes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers.
6. Assess the contributions of meteorology to our evolving understanding of global change and sustainability while placing the development of meteorology in its historical and cultural context.

Alignment with Institutional Core Learning Outcomes

In-depth	1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. *(Communication)*
In-depth	2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. *(Critical thinking and Problem-Solving)*
	3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. *(Quantitative Literacy)*
Minimally	4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. *(Cultural Awareness)*

Minimally	5. Recognize the consequences of human activity upon our social and natural world. *(Community and Environmental Responsibility)*

Outcome Assessment Strategies

The instructor will choose from the following methods of assessment: exams, quizzes, lab exercises, written reports, oral presentations, group projects, class participation, homework assignments, and field trips. The instructor shall detail the methods to be used to the students at the beginning of the course.

Course Activities and Design

The laboratory is not separate from the lecture, but will usually be correlated in such a way as to reinforce the materials being discussed in the lecture section. It is necessary for the student to successfully complete the laboratory section of the course in order to earn a grade in the course. Math will be used to solve ratio, percentage, and simple algebraic problems. Also included are the design, reading, and interpreting of graphs.

Course Content (Themes, Concepts, Issues and Skills)

A. Explain the nature and history of meteorology as a science

B. Discuss the structure and dynamics of the earth's atmosphere

C. Discuss the basic physical principles of energy

D. Explain how solar and gravitational energy drive weather

E. Describe the different facets of the hydrologic cycle and atmospheric circulation

F. Outline the details of weather observation

G. Discuss weather systems and major theories used to explain and predict the behavior of these systems

H. Outline the details of weather forecasting

I. Discuss climate, climate zones, and the factors that shape them

J. Explain how and why climate changes

K. Discuss how humans impact weather and climate change

L. Other topics as desired by the instructor

Meteorology as a Science

1. The scientific method as it applies to meteorology
2. Major divisions and activities of meteorology
3. Short history of meteorology

Atmospheric Basics

1. Physical and chemical properties of air
2. Structure of the atmosphere
3. Energy flow and dynamics of the atmosphere

Basics of Weather

1. Physics of energy - States and forms of energy, energy conversions, and types and behavior of radiant energy
2. Flow of energy through the atmosphere
3. Heat and temperature - basic physics, measurement, and temporal and geographical variation
4. Physics and chemistry of water
5. Water cycling within the atmosphere
6. Humidity
7. Couds, cloud formation, and precipitation
8. Physics of air - air pressure and density
9. Movement of air within the atmosphere
10. Measuring and mapping air pressure and winds
11. Types of winds - micro, meso, global scale

Weather Systems

1. Typical global and regional weather patterns

2. Systems, theory, and modeling
3. Global atmospheric circulation within the troposphere
4. Air mass characteristics and development
5. Weather front characteristics and behavior
6. Mid-latitude and tropical cyclone characteristics and development

Weather Forecasting

1. Weather data gathering and organization
2. Forecast techniques

Climate and Climate Change

Department Notes

Columbia Gorge Community College Science Department stands by the following statement regarding science instruction:

Science is a fundamentally nondogmatic and self-correcting investigatory process. Theories (such as biological and geologic time scale) are developed through scientific investigation are not decided in advance. As such, scientific theories can be and often are modified and revised through observation and experimentation. "Creation science", "Intelligent Design" or similar beliefs are not considered legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F.2d 1004).

The Science Department at Columbia Gorge Community College, therefore stands with organizations such as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula except to reference and/or clarify its invalidity.

CC date _____
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	☐ Prerequisites and Corequisites
☒ Title	☒ Outcomes
☒ Description	☐ Repeatability

Section #1 General Information			
Department	Arts & Humanities	Submitter name Phone Email	Susan Lewis 506-6047 slewis@cgcc.edu
Current prefix and number	ART 280	Proposed prefix and number	No change
Current course title	Painting	Proposed title (60 characters max)	Painting Basics
Current Repeatability	0	Proposed Repeatability	No change
Reason for proposed changes	To have a more illustrative name that expresses the beginning nature of the course.	Proposed transcript title (30 characters max)	Painting Basics

COURSE DESCRIPTION: To be used in the catalog and schedule of classes. Begin the course description with an active verb. **Avoid** using the phrases: This course will and/or students will. Include recommendations and requisites in description. Guidelines for writing descriptions can be found at Writing a Course Description.

Current Description (required whether being revised or not)	Proposed Description
Covers basic perceptual painting techniques and tools as well as the understanding of the language of painting in historical and contemporary contexts. Develops critical skills for composing and synchronizing both tonal and color temperature scales to achieve a successful painting. Audit available.	Introduces basic perceptual painting techniques and tools as well as the understanding of the language of painting in historical and contemporary contexts. Draws on the rich cultural diversity that exists in the field as a vehicle for developing personal self-expression. Develops critical skills for composing and synchronizing both tonal and color temperature scales to achieve a successful painting. Audit available.

Reason for description change	To better describe the beginning nature of the course. To address added learning outcomes.

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), not in the classroom outcomes. Three to six outcomes are recommended. See the Writing Learning Outcomes guidelines on the curriculum office webpage for more guidance.

Current learning outcomes (required whether being revised or not)	New learning outcomes
Upon successful completion of this course, students will be able to: 1. Implement creative strategies to solve problems in making paintings. 2. Implement the vocabulary needed to participate in a critical dialogue about painting. 3. Manifest autonomous expression through painting while recognizing the standards and definitions established by both contemporary and historical works of art from different cultures. 4. Apply perceptual and conceptual skills to develop a richer experience of the visual world.	Upon successful completion of this course, students will be able to: 1. Create personal works of art which demonstrate a basic understanding of the painting discipline as well as the processes, materials, and techniques associated with it. 2. Implement creative strategies to solve problems when composing paintings. 3. Ask meaningful questions, identify ideas and issues, and implement the basic vocabulary needed for active participation in critical dialogue about the painting process and experience. 4. Understand, interpret, and appreciate painting from different cultures and times, facilitating a lifelong engagement with the diversity of perspectives in the human experience. 5. Apply perceptual and conceptual skills to develop a rich experience of the visual world.

Reason for outcomes change	To better align outcomes with Core Learning Outcomes, making for a more robust Gen Ed course.

REQUISITES: Note: If this course has been approved for the Gen Ed list, it will have, as a default the following requisites: "Prerequisite: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121." If the department wants to set the RD, 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: MTH 20 or equivalent placement test scores. 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: MTH 20 or equivalent placement test scores. Prerequisite/concurrent: WR 121			
☐ Placement into:			
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con
prefix & number:	☐ Prerequisite	☐ Corequisite	☐ pre/con

Reason for requisite changes	No change

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	☐ Next available term after approval ☒ Specify term (Summer, 2018)
Allow 4-6 months to complete the approval process before scheduling the course.	

Section #3 Department Review		
This proposal has been reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Susan Lewis	slewis@cgcc.edu	1.12.18
Department Director	Email	Date
n/a	n/a	n/a

NEXT STEPS:

1. Save this document as the course prefix and number (e.g. MTH 65 or RET 112). Send completed form electronically to curriculum@cgcc.cc.or.us.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.

CGCC Course Content and Outcome Guide Development Template

COURSE NUMBER: ART 280

COURSE TITLE*:* Painting Basics

TRANSCRIPT TITLE*:* Painting Basics

TOTAL CREDITS: 3

LECTURE HOURS: 0

LECTURE/LAB HOURS: 60

LAB HOURS: 0

GENERAL EDUCATION DESIGNATION: yes

CULTURAL LITERACY DESIGNATION: no

REQUISITES: none

GRADING OPTIONS: A-F letter grade, Pass/No pass, Audit in consultation with faculty (A-F default)

REPEATABILITY FOR CREDIT: 0

COURSE DESCRIPTION: Introduces basic perceptual painting techniques as well as the rich and culturally diverse language of painting in historical and contemporary contexts. Explores the use of a variety of paint media. Develops critical skills for composing and synchronizing both tonal and color temperature scales to achieve a successful painting. Audit available.

STUDENT LEARNING OUTCOMES:

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

1. Recognize, use and appropriately maintain materials and tools in the painter's studio.
2. Create personal works of art which demonstrate a basic understanding of the painting discipline as well as the processes, materials, and techniques associated with it.
3. Implement creative strategies to solve problems in making paintings.
4. Ask meaningful questions, identify ideas and issues, and implement the basic vocabulary needed for active participation in critical dialogue about the painting process and experience.
5. Understand, interpret, and appreciate painting from different cultures and times, facilitating a lifelong engagement with the diversity of perspectives in the human experience.
6. Apply perceptual and conceptual skills to develop a rich experience of the visual world.

OUTCOME ASSESSMENT STRATEGIES: Assessment is based on conceptual understanding and quality of work. Assessment strategies may include class discussions, peer and instructor critiques, quizzes, etc.

TEXTS & MATERIALS (OPTIONAL): none

COURSE ACTIVITIES AND DESIGN: May include: demonstrations, slides, lectures, videos/films and field trips. A significant portion of class time is dedicated to hands-on activities and application of demonstrated skills.

COURSE CONTENT (Themes, Concepts, Issues and Skills):

After establishing a sound compositional foundation, class focus is on learning to perceive and produce correct tonal value, relative color saturation and color temperature. Then bringing all three spectrums into a synchronized unity. This creates a convincing and expressive painting.

Concepts and Skills:

- appropriate maintenance of a shared painting studio (cleanliness, safety, organization)
- explore use of various paint media for translation of ideas; introduction to the basic character of common media (acrylic, watercolor, tempra, oil).
- experience with various painting surfaces: stretched canvas (prepared in class), canvas board, Masonite, paper, etc.
- recognition and use of different painting tools (brushes, palette knives, sponges, etc.)
- the basic elements of art such as: color, line, value, texture, shape, volume and mass, composition, and spatial illusion.
- the interaction of color in terms of hue, value, and intensity and its effect on the visual statement and its relation to painting.
- begin to develop means of solving visual problems in a painting through critical and analytical methods, such as; examining compositional devices, observing interaction between positive and negative space/shape, demonstrating the difference between pictorial space and actual space
- introduction to diverse cultural styles that exist in contemporary and historical works of art

DEPARTMENT NOTES (OPTIONAL): A minimum of 3 hours of homework per week in the form of private exploration of the concepts and processes introduced in class will be required.

CC date _____
CC decision _____
CC vote _____

Columbia Gorge Community College

General Education/Discipline Studies List Request Form

(Double click on check boxes to activate dialog box)

1. General & Course Information:			
Department	Arts & Humanities	Submitter Name: Phone: Email:	Susan Lewis 6047 slewis@cgcc.edu
Course Prefix and Number:	ART 280	Course Title:	Painting Basics
Course Credits:	3	Gen Ed Category:	☒ Arts and Letters ☐ Social Science ☐ Science, Comp. Sci., and Math
Course Description:	Introduces basic perceptual painting techniques as well as the rich and culturally diverse language of painting in historical and contemporary contexts. Explores the use of a variety of paint media. Develops critical skills for composing and synchronizing both tonal and color temperature scales to achieve a successful painting. Audit available.		
Course Outcomes:	Upon successful completion of this course, students will be able to: 1. Recognize, use and appropriately maintain materials and tools in the painter's studio. 2. Create personal works of art which demonstrate a basic understanding of the painting discipline as well as the processes, materials, and techniques associated with it. 3. Implement creative strategies to solve problems in making paintings. 4. Ask meaningful questions, identify ideas and issues, and implement the basic vocabulary needed for active participation in critical dialogue about the painting process and experience. 5. Understand, interpret, and appreciate painting from different cultures and times, facilitating a lifelong engagement with the diversity of perspectives in the human experience. 6. Apply perceptual and conceptual skills to develop a rich experience of the visual world.		

Lower Division Collegiate (LDC) courses that apply for General Education/Discipline Studies status must:

1. **Be available to all CGCC students who meet the prerequisites for the course.**
2. **Ensure that the appropriate AAOT Discipline Studies outcomes and criteria are reflected in the course's outcomes.** (If you need to revise your course outcomes, you must complete a Course Revision form.)
3. **Verify course transfer status using the Course Transfer/Articulation Status form** (available on the curriculum website)**.** In order to obtain general education status, at least two OUS schools must confirm the course will transfer and one of the schools must approve the transfer as general education.
4. **Have the Standard Prerequisites unless the Department Chair has completed the Prerequisite Opt-Out form and that request is approved.**
5. **Be an LDC course that is eligible for the AAOT Discipline Studies List.**

In addition, course content must address the following:

1. **CGCC's General Education Philosophy Statement:** *Through a broad, well-balanced curriculum, the General Education program strives to instill a lifelong love of learning and to foster civic competence within our students.*
2. **CGCC Core Learning Outcomes (CLO):**

   Through their respective disciplines, CGCC students who earn a degree can:

   1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*)
   2. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*)
   3. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*)
   4. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*)
   5. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*)

Course outcomes and content are required, at a minimum, to demonstrate that CLOs 1 (*Communication*) and 2 (*Critical Thinking and Problem Solving*) are addressed in depth, and 1 additional CLO is addressed at least minimally.

2. Address CGCC Core Learning Outcomes:	
For each CLO addressed, provide the following: 1) list the course outcome(s) that clearly reflects the CLO; and 2) describe relevant course content, outlining how students will gain the skills and knowledge needed to achieve a level of mastery of the CLO. Please check the appropriate box, "no changes" or "revised," noting whether your response has changed since your last Gen Ed Request submission. Include previous response even if you are not making any revisions.	
Gen Ed designated courses are required to address CLOs 1 and 2 "in-depth."	
1. Communicate effectively using appropriate reading, writing, listening, and speaking skills. (*Communication*) ☒ in-depth **REQUIRED**	Outcomes: 2. Create personal works of art which demonstrate a basic understanding of the painting discipline as well as the processes, materials, and techniques associated with it. 4. Ask meaningful questions, identify ideas and issues, and implement the basic vocabulary needed for active participation in critical dialogue about the painting process and experience. Content: Painting in of itself is a form of communication in which the artist shares his/her emotions, feelings, opinions, world view, personal perspective, etc. This course introduces the language of painting as students begin to understand what can be communicated through color, value, perspective and a nuanced brushstroke. In addition, students practice verbalizing their intent and interpretation by participating in group discussions and peer critiques. Writing activities are included in the use of portfolios/journals as well as assignments related to the study of cultural diversity.
5. Creatively solve problems by using relevant methods of research, personal reflection, reasoning, and evaluation of information. (*Critical Thinking and Problem-Solving*) ☒ in-depth **REQUIRED**	Outcomes: 1. Recognize, use and appropriately maintain materials and tools in the painter's studio. 2. Create personal works of art which demonstrate a basic understanding of the painting discipline as well as the processes, materials, and techniques associated with it. 3. Implement creative strategies to solve problems in making paintings.

	6. Apply perceptual and conceptual skills to develop a rich experience of the visual world. Content: Students begin to develop means of solving visual problems in a painting through critical and analytical methods, such as; examining compositional devices, observing interaction between positive and negative space/shape, demonstrating the difference between pictorial space and actual space. Through exploration and experimentation, students begin to formulate an understanding of the characteristics of different painting media and evaluate each medium's potential strengths and challenges.
Provide a response for each of the following three CLOs that your course addresses. Gen Ed designated courses are required, at a minimum, to address one of these three "minimally" or "in-depth."	
6. Extract, interpret, evaluate, communicate, and apply quantitative information and methods to solve problems, evaluate claims, and support decisions in their academic, professional and private lives. (*Quantitative Literacy*) ☐ in-depth ☐ minimally ☒ not addressed significantly	
7. Appreciate cultural diversity and constructively address issues that arise out of cultural differences in the workplace and community. (*Cultural Awareness*) ☐ in-depth ☒ minimally ☐ not addressed significantly	Outcomes: 5. Understand, interpret, and appreciate painting from different cultures and times, facilitating a lifelong engagement with the diversity of perspectives in the human experience. Content: As students explore the different paint media, they are introduced to how its characteristics become intrinsic to different historic and cultural movements. Students are exposed to visual images from past and present artists of different cultures. They discuss and explore how these qualities may be incorporated into their own personal creations as they develop their own painting style and voice.
8. Recognize the consequences of human activity upon our social and natural world. (*Community and Environmental Responsibility*) ☐ in-depth ☐ minimally ☒ not addressed significantly	

3. Address the AAOT Discipline Studies Outcomes and Criteria:
Complete only the questions regarding outcomes and criteria for the category to which your course belongs - Art and Letters; Social Sciences; Science and Computer Science; or Mathematics.
Arts and Letters
Outcomes:

As a result of taking General Education Arts & Letters courses, a student should be able to:

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

Criteria:

A course in Arts & Letters should:

1. Introduce the fundamental ideas and practices of the discipline and allow students to apply them.
2. Elicit analytical and critical responses to historical and/or cultural works, such as literature, music, language, philosophy, religion, and the visual and performing arts.
3. Explore the conventions and techniques of significant forms of human expression.
4. Place the discipline in a historical and cultural context and demonstrate its relationship with other discipline.

And each course should also do at least one of the following:

1. Foster creative individual expression via analysis, synthesis, and critical evaluation;
2. Compare/contrast attitudes and values of specific historical periods or world cultures; and
3. Examine the origins and influences of ethical or aesthetic traditions.

List the course outcome(s) from the course's CCOG that clearly reflect the above outcomes and criteria.*	Upon successful completion of this course, students will be able to: 1. Recognize, use and appropriately maintain materials and tools in the painter's studio. 2. Create personal works of art which demonstrate a basic understanding of the painting discipline as well as the processes, materials, and techniques associated with it. 3. Implement creative strategies to solve problems in making paintings. 4. Ask meaningful questions, identify ideas and issues, and implement the basic vocabulary needed for active participation in critical dialogue about the painting process and experience. 5. Understand, interpret, and appreciate painting from different cultures and times, facilitating a lifelong engagement with the diversity of perspectives in the human experience. 6. Apply perceptual and conceptual skills to develop a rich experience of the visual world.

***Note:** It must be clearly evident that the above outcomes are addressed within the course's outcomes. Between your answers to the two outcomes questions below, you need to address all of the first four criteria as well as at least one of the criteria listed in the second set of three.

How does the course enable a student to "interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life"?	Through research of historical and cultural influence and hands-on practice, students gain fundamental skills in and understanding of an artistic process that is inherently creative and encourages self-expression and personal enrichment. The artist captures life on his/her canvas and shares its essence with those who are willing to engage with his/her work. How can this not "enrich the quality of life."
How does the course enable a student to "critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global	Students who take an art class are exposed to many different views and ideas as to why art is created and how it is influential. This course enables students to: • State their views as clearly as possible in a variety of methods. • Discuss personal views with class. • Critically evaluate the cases for and against a range of possible views.

issues"?	These skills will serve students well in dealing with any analysis of visual images past, present, and future. As students are exposed to and begin to examine the cultural and historical influences of painting throughout time, their own beliefs and views are developed and strengthened regarding why art is reflective of local and global issues.

Section # 4 Department Review		
This proposal has be reviewed at the Director level and approved for submission.		
Department Chair	Email	Date
Susan Lewis	slewis@cgcc.edu	2.9.18
Department Director	Email	Date
n/a	n/a	n/a

NEXT STEPS:

1. Save this document as the course prefix and course number.gened (e.g. HST 104.gened). Send completed form electronically to curriculum@cgcc.edu.
2. Complete the Course Signature form found in Forms on the curriculum website. Obtain required electronic or inked signatures and deliver to curriculum office by posted deadline. 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. Submission will be placed on the next agenda with available time slots. You will be notified of your submission's time for review. 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.