SANTA MONICA COLLEGE
ACADEMIC
SENATE
1900 Pico Boulevard Santa Monica, CA 90405
310.434.4611

# Curriculum Committee Agenda

## Wednesday, April 6, 2022, 3:00 p.m.

## Zoom Meeting:

**Join from PC, Mac, Linux, iOS or Android: https://cccconfer.zoom.us/j/93520754825**

**Or iPhone one-tap (US Toll): +16699006833,93520754825# or +13462487799,93520754825#**

**Or Telephone:**
**+1 669 900 6833 (US Toll)**
**+1 346 248 7799 (US Toll)**
**+1 253 215 8782 (US Toll)**
**+1 312 626 6799 (US Toll)**
**+1 646 876 9923 (US Toll)**
**+1 301 715 8592 (US Toll)**
**Meeting ID: 935 2075 4825**

**International numbers available: https://cccconfer.zoom.us/u/at7P4XBs**

**Or Skype for Business (Lync): SIP:93520754825@lync.zoom.us**

**Members:**

| | | | |
|---|---|---|---|
| Sheila Cordova, *Chair* | Walker Griffy | Jacqueline Monge | Briana Simmons |
| Jason Beardsley, *Vice Chair* | Hafedh Herichi | Maria Muñoz | Lydia Strong |
| Bren Antrim | Alex Ibaraki | Estela Narrie | Esau Tovar |
| Fariba Bolandhemat | Sharlene Joachim | Patricia Ramos | Audra Wells |
| Susan Caggiano | Bradley Lane | Brandon Reilly | Dominic Prendergast (A.S.) |
| Lisa Collins | Emin Menachekanian | Redelia Shaw | Denise White-Odimo (A.S.) |

**Interested Parties:**

| | | | |
|---|---|---|---|
| Joelle Adams | Rachel Demski | Tracie Hunter | Estela Ruezga |
| Stephanie Amerian | Nathaniel Donahue | Maral Hyeler | Scott Silverman |
| Maria Bonin | Joshua Elizondo (A.S.) | Laura Manson | Tammara Whitaker |
| Dione Carter | Kiersten Elliott | Stacy Neal | |

**Ex-Officio Members:**
Jamar London

*(Information items are listed numerically; action items are listed alphabetically)*

I. Call to Order and Approval of Agenda
II. Public Comments *(Two minutes is allotted to any member of the public who wishes to address the Committee.)*
III. Announcements
IV. Approval of Minutes ..... 3
V. Chair's Report

VI. Information Items

*(Non-Substantial Changes)*

1. CIS 35A QuickBooks Desktop
2. OFTECH 5 English Skills for the Office
3. OFTECH 9 Keyboarding Improvement
4. OFTECH 10 Skill Building on the Keyboard
5. OFTECH 20 Medical Vocabulary
6. OFTECH 28 Electronic Health Records
7. OFTECH 30 Legal Office Procedures
8. OFTECH 33 Records Management

VII. Action Items

*(Consent Agenda: Emergency DE to Fully Online and/or Hybrid)*

a. BIOL 10 Applied Ecology and Conservation Biology (Hybrid)
b. BIOL 22 Genetics and Molecular Biology (Hybrid)
c. NUTR 8 Principles of Food with Lab (Hybrid)
d. TH ART 10A Voice Development for the Stage (Fully Online and Hybrid)
e. TH ART 10B Advanced Voice Development for the Stage (Fully Online and Hybrid)
f. TH ART 13 Stage Dialects (Fully Online and Hybrid)
g. TH ART 20 Stagecraft (Hybrid)
h. TH ART 23 Projection and Lighting Design (Hybrid)

*(Courses: New)*



*(Courses: Substantial Changes)*



*(Courses: Distance Education)*



*(Courses: Global Citizenship)*



*(Programs: Revisions)*

o. Changes to degrees and certificates as a result of courses considered on this agenda

VIII. New Business

IX. Old Business

- Updating AR 5110

X. Adjournment

*Please notify Sheila Cordova or Jason Beardsley by email if you are unable to attend this meeting.*

**The next Curriculum Committee meeting is April 20, 2022.**

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# Curriculum Committee Minutes

## Wednesday, March 16, 2022, 3:00 p.m.

## Zoom Meeting

**Members Present:**

| | | | |
|---|---|---|---|
| Sheila Cordova, *Chair* | Hafedh Herichi | Jacqueline Monge | Briana Simmons |
| Jason Beardsley, *Vice Chair* | Alex Ibaraki | Estela Narrie | Esau Tovar |
| Bren Antrim | Sharlene Joachim | Patricia Ramos | Audra Wells |
| Susan Caggiano | Bradley Lane | Brandon Reilly | Dominic Prendergast (A.S.) |
| Walker Griffy | Emin Menachekanian | Redelia Shaw | Denise White-Odimo (A.S.) |

**Members Absent:**

| | | |
|---|---|---|
| Fariba Bolandhemat | Maria Muñoz | Lydia Strong |

**Others Present:**

| | | | |
|---|---|---|---|
| Lourdes Arévalo | Lorrie Ivas | La Tanya Louis | Howard Stahl |
| Robert Armstrong | Jing Liu | Elisa Meyer | Hari Vishwanadha |
| Rachel Demski | Jamar London | Pete Morris | |

*(Information items are listed numerically; action items are listed alphabetically)*

**I. Call to Order and Approval of Agenda**

The meeting was called to order at 3:03 pm. Motion to approve the agenda with no revisions.
**Motion made by:** Lisa Collins; **Seconded by:** Estela Narrie
The motion passed unanimously.
*(Emin Menachekanian, Redelia Shaw, Briana Simmons, and Denise White-Odimo not present for vote)*

**II. Public Comments**

None

**III. Announcements**

None

**IV. Approval of Minutes**

Motion to approve the minutes of March 2, 2022 with no revisions.
**Motion made by:** Audra Wells; **Seconded by:** Alex Ibaraki
The motion passed with the following: Y: 12; N: 0; A: 3 (Susan Caggiano, Walker Griffy, Sharlene Joachim)
*(Emin Menachekanian, Redelia Shaw, Briana Simmons, and Denise White-Odimo not present for vote)*

**V. Chair's Report**

- Reminder that conversions from Emergency DE to full DE need to be submitted by April 4.
- The website has also been updated with instructions for the various types of programs, including CE programs, including the Los Angeles Regional Consortium (LARC).

**VI. Information Items**

1. AP Research Exam (Interdisciplinary)
   Where course equivalency is not established, students will receive 3 units of elective credit for local degrees. If you feel this exam will serve as an equivalent course within your discipline, contact Estela.

The exam does not currently transfer credit to UC/CSU.

## VII. Action Items

*(Consent Agenda: Emergency DE to Fully Online)*

a. HEBREW 1 Elementary Hebrew I
b. HEBREW 2 Elementary Hebrew II
c. MATH 1 Bridge to College Mathematics
d. MATH 1B Bridge to College Mathematics 2
e. MATH 1C Bridge to College Mathematics 3
f. MATH 2C Concurrent Support for Precalculus
g. MATH 3C Concurrent Support for Trigonometry with Applications
h. MATH 4C Concurrent Support for College Algebra for STEM Majors
i. MATH 7 Calculus 1
j. MATH 8 Calculus 2
k. MATH 10 Discrete Structures
l. MATH 11 Multivariable Calculus
m. MATH 13 Linear Algebra
n. MATH 15 Ordinary Differential Equations
o. MATH 18 Intermediate Algebra for Statistics and Finite Mathematics
p. MATH 20 Intermediate Algebra
q. MATH 21 Finite Mathematics
r. MATH 21C Concurrent Support for Finite Mathematics
s. MATH 26 Functions and Modeling for Business and Social Science
t. MATH 26C Concurrent Support for Functions and Modeling for Business and Social Science
u. MATH 28 Calculus 1 for Business and Social Science
v. MATH 29 Calculus 2 for Business and Social Science
w. MATH 31 Elementary Algebra
x. MATH 32 Plane Geometry
y. MATH 41 Mathematics for Elementary School Teachers
z. MATH 50 Pre-Statistics
aa. MATH 54C Concurrent Support for Elementary Statistics

Motion to approve Consent Agenda: Emergency DE to Fully Online (VII. a. to VII. aa.) with no revisions.
**Motion made by:** Jason Beardsley; **Seconded by:** Lisa Collins
The motion passed unanimously.

*(Program Maps)*

bb. Geospatial Technologies Certificate of Achievement

Motion to approve Geospatial Technologies Certificate of Achievement Map with no revisions.
**Motion made by:** Susan Caggiano; **Seconded by:** Lisa Collins
The motion passed unanimously.

*(Courses: New)*

cc. ENGL 63 Science Fiction: Worlds Within Worlds (Prerequisite: ENGL 1)

Motion to approve ENGL 63 with no revisions.
**Motion made by:** Walker Griffy; **Seconded by:** Alex Ibaraki
The motion passed unanimously.

Motion to approve ENGL 63 prerequisite of ENGL 1 with no revisions.
**Motion made by:** Estela Narrie; **Seconded by:** Walker Griffy
The motion passed unanimously.

*(Courses: Substantial Changes)*

dd. FASHN 6A Pattern Drafting and Design (Changed: course name – was: “Pattern Analysis and Design”; SLOs; Methods of Evaluation)

Motion to approve changes to FASHN 6A with no additional revisions.

**Motion made by:** Lisa Collins; **Seconded by:** Jacqueline Monge
The motion passed unanimously.

ee. FASHN 7 Fashion Textiles (Changed: course name – was: "Fabrics for Fashion Design and Merchandising")
Motion to approve changes to FASHN 7 with no additional revisions.
**Motion made by:** Jason Beardsley; **Seconded by:** Jacqueline Monge
The motion passed unanimously.

ff. FASHN 15 Ethnic Fashion (Removed: Prerequisites: FASHN 9A and FASHN 9B; Advisory: FASHN 6A; Changed: Course Content; Changed: SAM code from B to C)
Motion to approve changes to FASHN 15 with no additional revisions.
**Motion made by:** Jason Beardsley; **Seconded by:** Susan Caggiano
The motion passed unanimously.

gg. FASHN 17 Apparel Collection Design and Production (Changed: course name – was: "Apparel Production Manufacturing Techniques"; course description)
Motion to approve changes to FASHN 17 with no additional revisions.
**Motion made by:** Estela Narrie; **Seconded by:** Jacqueline Monge
The motion passed unanimously.

*(Courses: Distance Education)*

hh. ENGL 63 Science Fiction: Worlds Within Worlds
Motion to approve distance education for ENGL 63 with no revisions.
**Motion made by:** Jason Beardsley; **Seconded by:** Estela Narrie
The motion passed unanimously.

*(Programs: New)*

ii. Data Analyst Certificate of Achievement
Motion to approve Data Analyst Certificate of Achievement with no revisions.
**Motion made by:** Jason Beardsley; **Seconded by:** Esau Tovar
The motion passed unanimously.

*(Programs: Revisions)*

jj. Changes to degrees and certificates as a result of courses considered on this agenda
Motion to approve changes to degrees/certificates as a result of courses considered on this agenda.
**Motion made by:** Estela Narrie; **Seconded by:** Susan Caggiano
The motion passed unanimously.

*Question of whether we can add maps to the "Changes to degrees and certificates" statement. This will be added as a discussion item for the next Curriculum Committee meeting.*

**VIII. New Business**

None

**IX. Old Business**

- Updating AR 5110
  Discussion on updating of AR 5110, Section 1, with a focus on faculty representation. Reports prepared by Academic Affairs were shared, including total teaching hours, and total courses and programs per department. Proposed ideas will be brought to Department Chairs for discussion within departments, including, but not limited to – keeping representation as-is, adding additional seats for departments with highly increased workloads, and the possibility of having a representative for each department. Further discussion to follow at future Curriculum Committee meetings.

**X. Adjournment**

Motion to adjourn the meeting at 4:46 pm
**Motion made by:** Lisa Collins; **Seconded by:** Estela Narrie
The motion passed unanimously.

## New Course: GEOLOGY 6, Environmental Geology with Lab

| | |
|---|---|
| **Units:** | 4.00 |
| **Total Instructional Hours (usually 18 per unit):** | 108.00 |
| **Hours per week (full semester equivalent) in Lecture:** | 3.00 |
| **In-Class Lab:** | 3.00 |
| **Arranged:** | 0.00 |
| **Outside-of-Class Hours:** | 108.00 |
| **Transferability:** | Transfers to CSU, UC (pending review) |

| | |
|---|---|
| **Degree Applicability:** | Credit – Degree Applicable |
| **Proposed Start:** | Fall 2023 |
| **TOP/SAM Code:** | 191400 - Geology / E - Non-Occupational |
| **Grading:** | Letter Grade or P/NP |
| **Repeatability:** | No |
| **Library:** | Library has adequate materials to support course |
| **Minimum Qualification:** | Earth Science |
| **Program Impact:** | None |

**Rationale**

This course would offer students an alternative introductory geology lab course to the popular Physical Geology with lab (Geol 4). While this course will provide students with an understanding of the fundamentals of the discipline of geology, the course will be taught with a focus on environmental geology, specifically the interactions between humans and the environment. This course will also offer students a more environmentally focused lab elective as part of the completion of either an AA in Environmental Science or an AA in Environmental Studies. This course meets the state C-ID GEOL 131.

I. **Catalog Description**

This course is an introduction to the fundamentals of Environmental Geology with laboratory. Topics include the interactions between and impacts of humans with the environment in a geologic context. This course emphasizes the Earth system and connections between the geosphere, biosphere, atmosphere, and hydrosphere.

II. **Examples of Appropriate Text or Other Required Reading:**

(include all publication dates; for transferable courses at least one text should have been published within the last five years)

1. Environmental Geology, 4, Jim Reichard, McGraw Hill © 2021, ISBN: 9781260368277
2. Environmental Geology, 11, Carla Montgomery, McGraw Hill © 2020, ISBN: 9780078022951
3. Benjamin P. Hooks. Laboratory Manual for Physical and Environmental Geology, Laboratory Manual for Physical and Environmental Geology
4. Jack W. Travis. Environmental Geology Workbook, Waveland Press, Inc.
5. Dorothy Merritts; Kirsten Menking; Andrew DeWet. Environmental Geology, Macmillan

III. **Course Objectives**

Upon completion of this course, the student will be able to:

1. Explain and practically apply the principles of the scientific method
2. Demonstrate a fundamental understanding of concepts, principles and interactions of Earth's systems including: Hydrologic Cycle Rock Cycle Plate Tectonics Geologic Hazards Impacts of Energy and Resource Usage Climate, Climate Change and the Greenhouse Effect Connectivity between geosphere, atmosphere, hydrosphere and biosphere
3. Articulate how human activities impact the environment
4. Recognize and understand how to mitigate geologic hazards
5. Demonstrate an ability to communicate complex course concepts effectively in writing and diagrams
6. Demonstrate the ability to read and interpret topographic and geologic maps and answer questions pertaining to geologic processes

IV. **Methods of Presentation:**

Lecture and Discussion, Lab, Field Trips, Online instructor-provided resources, Group Work, Projects, Discussion, Observation and Demonstration, Visiting Lecturers, Field Experience, Distance Education

V. **Course Content**

| % of Course | Topic |
|---|---|
| 25.000% | Formation of the Earth and Plate Tectonics: Plate Tectonics, Geologic Time and Earth History, and Geologic Structures. |
| 25.000% | Earth Resources: Rocks and Minerals, Soils, Water, Energy, Human Impacts, including exploitation and use, population, and waste. |
| 25.000% | Earth Systems: Rock Cycle, Carbon Cycle, Nitrogen Cycle, Water Cycle, and Weather and Climate. |
| 25.000% | Geologic Hazards: Mass wasting, Flooding and drought, earthquakes, tsunamis, volcanoes, pollution, groundwater quality and subsidence, extreme weather, climate change, and sea level change. |
| 100.000% | Total |

VI. **Methods of Evaluation**

| % of Course | Topic |
|---|---|
| 30% | Lab Reports |
| 30% | Exams/Tests: Four exams covering three to four chapters per exam, including a final exam. |
| 20% | Quizzes: Weekly quizzes covering course content and reading. |
| 20% | Other: Additional educational opportunities will be provided in the class as graded assignments that provide supplemental opportunities to learn concepts and reinforce understanding of certain concepts. Examples might include in class or virtual discussions centered on chosen readings or videos, short interactive exercises, and/or group or class projects. |
| 100% | Total |

VII. **Sample Assignments:**

**Carbon Sequestration along the Ocean Floor:** Overview The level of carbon dioxide in the atmosphere is higher than it has been in the last 4 million years. It is scientifically known and accepted that the unprecedented amount of carbon dioxide in the atmosphere is the result of human actions, specifically the burning of fossil fuels. Despite this collective agreement, the transition away from fossil fuels has been and continues to be a slow process, complicated by cultural and economic factors. While we as a global society are working to end our reliance on fossil fuels, the amount of carbon dioxide currently in the atmosphere has left a legacy that is difficult to undo. With this in mind, scientists are asking if there is anything that can be done in the meantime to sequester some of the carbon dioxide in the atmosphere and store it in natural sinks. One such natural sink is carbonate rock, which consists of calcium carbonate. A common carbonate rock is Limestone, which typically forms in marine environments. For scientists, this begs the question, could we capitalize on this natural process and replicate it in a more expedient way? Part 1: Converting gaseous carbon dioxide into calcium carbonate. In this activity, you will prove to yourself that creating calcium carbonate rocks is as easy as combing dissolved calcium with gaseous carbon dioxide. Follow the instructions and then answer the questions below. Part 1: Instructions 1. Students will separate into groups of 4. 2. Each group will be provided with Daily Lime Water, a calcium-rich solution sometimes used in medicines, antacids, lotions and disposable straws. 3. Students will use a straw to blow carbon dioxide-rich air into the solution and note their observations. Part 1: Questions 1. Describe the appearance of the Lime Water before you aerate it. 2. Describe how the appearance of the Lime Water changes once you begin to aerate it. 3. What is causing this change in appearance? In other words, what solid is forming? 4. This process is what occurs on a much larger scale in the ocean. This process involves the movements of mass from one Earth system to another as a part of the carbon cycle. Describe how carbon cycled and which Earth systems were involved when gaseous carbon interacted with a calcium-rich solution creating a calcium carbonate solid. Part 2: Watch PBS Terra's "Can Turning CO2 to Stone Help Save the Planet? – Out of Our Elements" Watch the following video to explore the complexities of converting atmospheric carbon into solid rock. URL to Video: https://youtu.be/Hm6HbgOmZDk NOTE: Click "CC" to enable closed captioning. Part 2: Instructions Watch the following video and answer the questions below. URL to Video: https://youtu.be/Hm6HbgOmZDk NOTE: Click "CC" to enable closed captioning. Part 2: Questions 1. What is Dr. Greeshma Gadikota, a chemical engineer at Cornell University, researching? 2. Pumping gaseous CO2 underground is a method that is currently being used to capture carbon dioxide. What are some of the complications

with this process? In other words, why is it better for it to combine with other elements to form solid rock? 3. What does Dr. Gadikota mean when she says that turning CO2 into rock is an energetically favorable pathway? 4. If our planet naturally takes calcium carbonate out of the ocean-atmosphere system, why can't we just let it happen naturally? 5. What rock helps turn CO2 into stone? 6. What chemical elements are naturally present in basaltic rock that make it so reactive? 7. What did the Icelandic demonstration project, CarbFix, find? 8. Why does Dr. Angela Slagle of the Lamont-Doherty Earth Observatory argue that the ocean floor is an ideal place for this reaction (i.e. chemical weathering of basaltic rock into calcium carbonate) to occur? 9. How does porosity play a role in the process of sequestering carbon in basaltic rock? 10. Why is so much of the ocean floor made up of basaltic rock? 11. How many "years" of CO2 emissions could this process potentially store in the ocean floor? 12. Why might the Cascadian Basin in the Pacific Northwest of the United States and the Kerguelen Islands be especially good for this type of carbon sequestration? 13. If this type of carbon sequestration is possible, why aren't we doing it? 14. Is turning our carbon emissions into rock enough to solve the global climate crisis?

**Soil My Undies Challenge: Using Cotton Underwear to Assess Soil Health:** Overview Soil in a very basic sense is simply a loose mixture of weathered remains of rock, organic matter, water, and air. Most of us probably think very little about soil, yet all of us depend on soil's ability to support plant growth, specifically its ability to grow the food that we need to survive. Soil, like so many of Earth's resources, is suffering the consequences of human actions, including but not limited to, overuse, pollution, and climate change. Despite its simplicity, soil is crucial to our survival. Sadly, it is also highly vulnerable to the impacts of a rapidly changing climate. For many of us, the process of acquiring food begins at the grocery store, but the truth is that it begins with the soil. Farming has been a part of human civilization for thousands of years. Regardless of the time and place in which the practice occurred, successful farming has always required healthy soil. Yet not all soil is created equally, and therefore, not all soil is capable of growing the food we need in the quantities that we need it. There are a number of ways to assess the quality of your soil, but one of the most arguably fun ways to assess soil health is to bury a pair of fresh cotton underwear in the soil. In December of 2018, the United States Department of Agriculture National Resources Conservation Service launched a campaign that capitalized on what farmers had been doing for years: using underwear to visually assess the health of their soil. Healthy soil is characterized by the presence of billions of microscopic organics. In fact, there are more microbes in a single teaspoon of healthy soil than there are people on the planet! Like all life, microbes need to eat. But what do these microbes eat? They eat organic matter, including cotton! With this in mind, farmers began burying pairs of new cotton underwear in the soil. The buried pairs were unearthed at least 60 days later. The more the underwear broke down the healthier the soil was! Part 1: Watch and Learn In this activity you will watch one California farm take the: Soil My Undies Challenge." Instructions 1. Watch the CAFFflix (CAFF = California Alliance with Family Farmers) Soil My Undies Challenge: Measuring Soil Biology with a Pair of Briefs. URL: https://youtu.be/qkOfICJpEDI. NOTE: Click "CC" to enable closed captioning. 2. Answer the following questions. Part 1: Questions 1. Where does this video take place? 2. What does the phrase, "Healthy Soil is Hungry Soil" mean? 3. What is the composition of the underwear they use in the "Soil My Undies Challenge?" 4. What is the procedure for burying the underwear? 5. What will the underwear look like after it is unearthed if the soil it is buried in is healthy? Part 2: Soil Your Undies Challenge In this activity, you will take the "Soil My Undies" Challenge. Instructions 1. In groups of four, students will be given two new pairs of 100% cotton brief underwear. 2. Students will work with Club Grow on campus to isolate a plot of soil that they may bury their pair of underwear into. 3. Students will also choose an alternate site, such as a backyard or possibly a site on campus, to bury their second pair of underwear. The site must be a location that is accessible to at least one person in the group and that will not be disturbed for a period of 60 days. 4. Students will leave each pair of underwear buried for 60 days. 5. After 60 days of burial, students will retrieve both pairs of underwear photographing the appearance of each pair after removal. 6. Students will interpret their results by: a. Visually determining which of the two locations had healthier soil. b. Trying to determine what factors may be affecting the soil at each location. 7. Students will present their results to the class.

VIII. **Student Learning Outcomes:**

1. Students will recognize and apply the scientific method to environmental geology.
2. Students will demonstrate an understanding of geologic principles and concepts fundamental to environmental geology, including Earth systems, the Theory of Plate Tectonics, Geosphere materials, geologic hazards, energy resources, water resources, and climate.
3. Students will identify specific examples of how humans and geology intersect in the context of environmental geology, specifically where Earth resources, geologic hazards, energy, and climate are concerned.
4. Students will apply a geologic framework to examine environmental-geology related problems affecting society, including but not limited to, Earth resources, geologic hazards, energy, and climate, and discuss mitigation strategies.

**Global Citizenship Application**

**Global Citizenship Category**
Ecological Literacy

**Course content focuses primarily on at least one of the following four areas:(Check all that apply)**
- ☑ Scientific understanding of Earth's natural systems and cycles, emphasizing humanity's role as the planet's ecologically dominant species and how that affects the continuing viability of habitats for life on Earth.
- ☑ Analysis of human activity and its impact on Earth's natural environments, both local and global, and the shorter-and longer-term implications for the planet's livability and sustainability.

**Outcomes that pertain to this Global Citizenship Category**
- ☑ Students will identify specific examples of how humans and geology intersect in the context of environmental geology, specifically where Earth resources, geologic hazards, energy, and climate are concerned.
- ☑ Students will apply a geologic framework to examine environmental-geology related problems affecting society, including but not limited to, Earth resources, geologic hazards, energy, and climate, and discuss mitigation strategies.

**Narrative**
As the description for Ecological Literacy so eloquently states, Earth systems, specifically the Geosphere, Atmosphere, Hydrosphere, and Biosphere, together create the foundation for life on Earth. Geology is the study of the Earth as a whole, including the systems that comprise it, the materials and resources that nurture life, and the processes that drive change on Earth. Geology examines the long-term cycles on Earth as a function of Earth's systems, specifically identifying how fluctuations within each system impact and influence changes in all of Earth systems, such as the role of the biosphere in the evolution of atmospheric chemistry, and consequently, climate. In effect, geology is a tool that lets us explore and examine the foundation of our world. Without a functional understanding of geology, pressing geologic issues such as geologic hazards, environmental pollution, water shortages, and a rapidly changing climate are devoid of the natural historical context necessary to make sense of these issues let alone mitigate them. The power of environmental geology as a discipline and an applied science is that it lives at the intersection of humanity and geology. Students versed in environmental geology not only develop a solid understanding of fundamental geologic principles and concepts, but they also gain an appreciation for the ways in which humanity and geology intersect.

**Departmental or Area Vote on Fulfillment of Global Citizenship Degree Requirement:**
Yes 9; No 0; Abstain 0; Not Voting 0

## GEOL 6 Distance Education Application

☑ Fully Online

**1a. Instructor - Student Interaction:**
There will be frequent instructor-student interactions. Each week students will be greeted by an announcement that summarizes the content introduced last week, highlights the major takeaways from last week's module, introduces the new module, and outlines what students will complete each week. The instructor will also regularly post announcements alerting students to opportunities on campus, extra credit opportunities in the course, and any other announcements relevant to the course or student life at SMC. Each week students will check in with the class and the instructor in a weekly discussion board guided by a prompt written by the instructor. In this discussion, students will have the opportunity to reflect on their performance each week, to share their successes and challenges, to announce how they plan to approach the upcoming week, and to discuss any thoughts/questions they had from the previous module. The instructor will read these each week and provide personalized responses to the students that may lead to further dialogue between the student and instructor. The course will be structured into modules that cover one or more concepts each week. In each module, the instructor will engage with the student through pre-recorded videos, pages containing content curated by instructor, and interactive activities that include the instructor and students. The instructor may also elect to hold live virtual meetings using video conferencing technology to interact with students. The instructor will be available during regularly scheduled office hours each week through video conferencing software. Students will use the video conference function in the LMS to sign-up for specific time slots during office hours. Additional office hours will be scheduled, if needed for student convenience. The course will have a Q&A discussion board where the instructor and students may communicate readily about course content and questions concerning weekly activities. The instructor will also be available through email; all emails sent M-F will be replied to within 24 hours.

**1b. Student - Student Interaction:**
Students will interact with one another via threaded discussion boards. In each week's module, the instructor will assign one or more prompt-guided discussions where students will discuss concepts introduced in that week's module. Students will be required to submit individual posts and reply to other students' submissions. The instructor will also create informal

threaded discussion boards where students can connect virtually in an informal setting similar to the way students engage before and after class in an on-ground setting. The instructor will also create an informal discussion board where students can ask questions about the class that apply to all students similar to the way students can raise their hand in an on-ground class and ask questions about the course. The instructor will respond to student questions, but students will also be encouraged to respond to one another. Students may also use threaded discussion boards to create lab groups and collaborate on other group-oriented class work. The instructor may also elect to hold optional virtual work sessions via video conferencing, such as Zoom, so that students may engage with one another while completing group-oriented coursework.

**1c. Student - Content Interaction:**

Students will interact with content in a variety of ways, including but not limited to, pages that consist of curated content, pre-recorded videos created by the instructor and/or from reputable educational sources, discussion boards, guided chapter review questions, chapter quizzes, lab exercises, and lab quizzes. On occasion, additional assignments are offered to provide additional learning opportunities. The chapter quizzes will provide a low-stakes opportunity for students to test their mastery and understanding of the course material before exams. Lab quizzes will assess students' comprehension of core aspects of each week's lab. Students will also be provided with extra credit opportunities that encourage student engagement. All video content will have captioning to go with the audio portion.

**1d. Distance Ed Interactions:**

| Online class activities that promote class interaction and engagement | Brief Description | Percentage of Online Course Hours |
|---|---|---|
| Exams | Four exams will be given. Each exam will cover 3-4 chapters. These exams will be administered via Canvas or similar learning management software. Weekly reading quizzes will be completed by students after they finished the reading and complete an optional outline. | 30.00% |
| Online Lecture | Interactions with the online lecture portion of this class will take advantage of the distance education platform. Each week students will interact with curated pages, including but not limited to written content, visual images, videos featuring the instructor and/or chosen by the instructor, and interactive activities with the instructor and classmates. These curated pages will introduce students to the material and explain the fundamental concepts for the week. When needed, videos will also be included that feature the instructor walking students through labs and/or any other aspects of the week (i.e. assignments, discussion boards, etc.) that require a more detailed explanation. | 20.00% |
| Threaded Discussions | Students will respond weekly to a threaded discussion. This will be a space for the instructor to check comprehension, answer questions as needed, and for students to provide peer-to-peer instruction. | 10.00% |
| Written assignments | Writing is a core component of this course in a distance education format. Students will submit informal written submissions through email, in informal discussion threads, and graded assignments. For example, students will check in each week with the instructor in a written response where they reflect on their experience in the class. Writing will also be a core component used to assess students comprehension of concepts and applications in class, including threaded discussions, essay questions on quizzes and exams, essay assignments, and the written components of laboratory exercises. | 5.00% |
| Videos | Each weekly module will included videos. Videos presented in class includes those created by the instructor, those chosen by the instructor for educational value, and cinematic films that highlight environmental-geology related videos. An example of a video includes the following TED talk: https://www.ted.com/talks/kelsey_leonard_why_lakes_and_rivers_should_have_the_same_rights_as_humans?language=en | 5.00% |
| Other (describe) | Weekly labs accompany each lecture. Labs are an opportunity for students to engage more deeply with the material through exercises designed to help students think critically and apply their knowledge (i.e. identify rocks and minerals based on their learning of mineral and rock types from lecture and reading) Percentage of Online Course Hours:30.00 | 30.00% |

**2. Organization of Content:**

The course introduces students to the concepts fundamental to environmental geology. Content is organized around the concepts listed in the course content outline and follows a linear structure where the underlying themes of environmental geology are taught and then using that knowledge students build their knowledge base. As they master concepts, they are introduced to higher level learning which requires them to tap into their earlier acquired knowledge. The course will be

organized into weekly modules that introduce one or more concepts each week. As stated above, each week the instructor will post an announcement summarizing the content introduced in the previous module, where applicable, and introducing the upcoming module. Each module will begin with an overview of the module and conclude with a summary of the module posted as pages in the LMS. Content will be organized into pages curated by the instructor summarizing concepts introduced in the module, captioned videos created by the instructor and/or reputable educational sources, quizzes allowing students to assess their mastery of the concepts introduced, threaded discussions allowing students to engage with the material and one another, and labs or other interactive activities. Other course-specific components will be developed and provided as necessary. All material is presented through the available technologies and primarily relies on the College preferred LMS and video conferencing technology. The assigned activities allow students to assess their performance and progress in each module at their own pace within the general deadlines provided. Class activities provide immediate feedback to ensure progressive involvement and successful completion of each module in the course.

**3. Assessments:**

| % of grade | Activity | Assessment Method |
|---|---|---|
| 30.00% | Exams | There will be an exam at the end of every 3-4 chapters (1/4 of the way through the course content) which will be in the form of a multiple choice test completed online through Canvas or a similar platform |
| 20.00% | Reading Quizzes | At the end of each weekly chapter, students will take a quiz that will be submitted online. The quiz will consist of a variety of questions that can include multiple choice, matching, true-false, fill-in-the-blank, and/or short answer questions. |
| 20.00% | Threaded Discussions | For each chapter, students will be expected to respond to posted questions in the threaded discussion. Students will respond to the prompt as well as to each other and post them in a dedicated threaded discussion board. |
| 30.00% | Labs | A lab will be assigned to each module and a detailed report submitted |

**4. Instructor's Technical Qualifications:**

An instructor would need knowledge and experience delivering course content remotely through the College preferred LMS. They would need to know how to schedule secure video conferencing, such as Zoom meetings, for virtual meetings with students and how to create breakout rooms in video conferencing such as Zoom for students to collaborate during group exercises.

**5. Student Support Services:**

All student support services should be integrated into the online classroom to facilitate easier access to these resources for our students. If the students can find links to counseling, financial aid, the bookstore, the library, and the center for wellness and wellbeing in one place it will increase the likelihood that they will access those resources when they need them.

**6. Accessibility Requirements:**

Recorded lectures will have captioning, all videos will have closed captioning as well. Documents and assignments will incorporate accessible features such as alternative text, headings for data tables, and skip navigation. All additional and supplemental material will also be accessible to the fullest extent possible, when that is not possible, appropriate alternative accommodations will be made by the instructor.

**7. Representative Online Lesson or Activity:**

Topics discussed in Environmental Geology have real world applications. It is all but impossible to review the daily news and not find an article featuring an issue that relates to environmental geology. In an interest to bring the relevance of this topic from the real world into our classroom, your professor will choose articles for you to read each week that relate to Environmental Geology. Your job will be to dissect the complexity of this issue by: 1) reading the article, 2) completing a PMIQ assessment, and 3) participating in a threaded discussion with your peers.

"PMIQ" stands for Positive, Minus, Interesting, and Question, respectively. Most, if not all, environmental geology-related issues are complex; they are neither completely positive or completely negative. As you explore an environmental geology-related issue you will likely identify positive aspects/outcomes of this issue, negative aspects/outcomes of this issue, ideas/concepts that pique your interest about this issue, and ideas/concepts that leave you with questions. This assignment asks you to articulate those reactions.

After reading the article, you will complete a PMIQ assessment of this article by:

1. Listing, in complete sentences, two (2) Pluses ( the "P") of the topic/ideas/arguments explored in this article? In other words, what are two positive aspects/outcomes of this issue? This does not have to be explicitly stated in the article, but could instead be ways that you envision that this issue could lead to something positive, or already has.

2. Listing, in complete sentences, two (2) Minuses (the “M”) of the topic/ideas/arguments explored? In other words, what are two negative aspects/outcomes of this issue? This does not have to be explicitly stated in the article, but could instead be ways that you envision that this issue could lead to something negative, or already has.
3. Listing, in complete sentences, two (2) ideas/concepts that you found Interesting (the “I”) about the topic/ideas/arguments explored.
4. Listing, in complete sentences, two (2) Questions (“Q”) you have about the topic/ideas/arguments explored.

Your final PMIQ assessment will include:

-2 complete “plus” sentences labeled as P1 and P2.
-2 complete “minus” sentences labeled as M1 and M2.
-2 complete “interesting” sentences labeled as I1 and 12.
-2 questions labeled as Q1 and Q2.

NOTE: There are no right or wrong answers, as long as your PMIQ list is based on the article and is appropriate to share in a classroom setting.

Participating in this discussion requires that you 1) submit a post and 2) reply to at least two peers.

Your post should include your PMIQ list in the following format:
-2 complete “plus” sentences labeled as P1 and P2.
-2 complete “minus” sentences labeled as M1 and M2.
-2 complete “interesting” sentences clearly labeled as I1 and I2.
-2 questions written as complete sentences labeled as Q1 and Q2.
-Each sentence should be a complete sentence and cannot exceed 50 words.
-Your entire PMIQ list cannot exceed 400 words.

After submitting your post, you will reply to at least two of your classmates' posts. Your comment can:
-Agree with or contradict one of the P, M, I, or Q points listed.
-Be a question about one of the P, M, I, or Q points listed
-Expand on a P, M, I, or Q point listed (i.e. continue the discussion).
-Your reply can be authentic, but be mindful of the etiquette warning below.

NOTE: Try to reply to posts that don't yet have replies or have very few replies, before responding to those that do.

ETIQUETTE WARNING: You can (and are encouraged to) engage each other in a virtual discussion, but you are expected to do so with respect and professionalism. Students that violate this etiquette will receive a ZERO on the assignment and will not be given the opportunity to make up the assignment.

## New Course: GEOGRAPHIC INFORMATION SYSTEMS 28, Introduction to Python for GIS

| | |
|---|---|
| **Units:** | 1.50 |
| **Total Instructional Hours (usually 18 per unit):** | 54.00 |
| **Hours per week (full semester equivalent) in Lecture:** | 1.00 |
| **In-Class Lab:** | 2.00 |
| **Arranged:** | 0.00 |
| **Outside-of-Class Hours:** | 36.00 |

| | |
|---|---|
| **Transferability:** | None |
| **Degree Applicability:** | Credit – Degree Applicable |
| **Pre/Corequisite(s):** | GIS 20 |
| **Proposed Start:** | Fall 2022 |
| **TOP/SAM Code:** | 220610 - Geographic Information Systems / D - Possibly Occupational |
| **Grading:** | Letter Grade or P/NP |
| **Repeatability:** | No |
| **Library:** | Library has adequate materials to support course |
| **Minimum Qualification:** | Computer Science; Geography |
| **Program Impact:** | Proposed for inclusion in an existing degree or certificate<br>• Geospatial Technology Certificate |

**Rationale**
Having at least an entry-level competence in programming has become a critical requirement for many geospatial job positions. Python is one of the most popular scripting languages in the GIS arena, especially for those who want to perform geospatial data processing, analysis, and visualization with the mainstream GIS software products such as ESRI's ArcGIS, QGIS, Carto, Google Earth Engine, etc. According to our Geospatial Technology Certificate Advisory Board, most employers prefer to hire applicants who have Python scripting skills with those GIS products. The target population of the course will be students who have finished an entry-level GIS course, and would like to move beyond the out-of-the-box capabilities of desktop GIS software to automate and customize geoprocessing, geospatial data analysis and visualization.

I. **Catalog Description**
This course introduces students geospatial scripting and programming with Python, which is one of the most popular, user-friendly and in-demand programming languages for Geospatial applications. Students will learn the basics of Python, useful Python libraries for geospatial data science, interacting with API's for various GIS applications such as geocoding, geoprocessing, and data visualization. The course will also introduce students how to use GitHub, Jupyter Notebooks and various Python development practices.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Python Scripting for ArcGIS Pro, 1, Paul A. Zandbergen, ESRI Press © 2020, ISBN: 9781589484993
2. Geoprocessing with Python, 1, Chris Garrard, Manning Publications © 2016, ISBN: 9781617292149

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Develop spatial questions that can be explored using Python for Geospatial methods and mapping techniques.
2. Demonstrate the understanding of the fundamentals of Python programming
3. Effectively conceptualize and perform spatial data processing (geoprocessing).
4. Obtain and transform spatial data for analytical insights
5. Create maps and visualizations to support analytical insights.

IV. **Methods of Presentation:**
Lecture and Discussion, Lab, Observation and Demonstration, Discussion, Distance Education, Projects, Group Work, Online instructor-provided resources

V. **Course Content**

| % of Course | Topic |
|---|---|
| 15.000% | Python Fundamentals: Setup, Data Types, Variables, Functions, Libraries, Looping, Simple Input/output, Debugging and Testing |
| 15.000% | Exploratory Data Analysis & Visualization with Matplotlib and Seaborn, Pandas/GeoPandas |
| 15.000% | Geoprocessing with GeoPandas |
| 15.000% | Static Mapping with Python, Cartopy, Matplotlib |
| 15.000% | Interactive Data Visualization Folium and Plotly |
| 10.000% | Python for Databases (Psycopg) |
| 15.000% | Introduction to Python API and examples at Carto, ArcGIS, and Google Earth Engine |
| 100.000% | Total |

VI. **Methods of Evaluation**

| % of Course | Topic |
|---|---|
| 30% | Homework: Students will have 10 homework assignments for practicing basic concepts and coding skills. They will also participate in group discussion 1) to share the understanding of the key concepts; 2) to comment on each other's coding work; 3) to inspire each other in the final projects. |
| 25% | Lab Reports: 5 labs to practice python coding skills for geospatial analysis and visualizatioin |
| 20% | Quizzes: Students will finish 5 module quizzes to evaluate the knowledge and skills learned in each module. Each quiz contains various question types, such as multiple choice questions, short written essay questions, fill-in-blank questions, etc. |
| 25% | Final Project: Student will finish a final project to demonstrate the understanding to the key concepts and demonstrate the python coding skills. |
| 100% | Total |

VII. **Sample Assignments:**

**Make a map using Geopandas:** Objectives: 1) Read geographic data in Geopandas. 2) Visualizing data as maps Steps: 1) Reading Geographic data. Write a few lines of python code using .read_file() method to load the following 3 datasets: Countries, Cities, Rivers. The three datasets are located in your "Assignment1-introData" folder in a geopackage format (.gpkg). 2) Explore the data Write a few lines of python code to print out the general information of the data, including the first 5 rows of each dataset, the total number of records and the total number of attributes in each dataset, and the basic descriptive statistics of each dataset. You will use the following commands: 2a) .head() method returns back the first 5 rows. You can adjust the number of rows to get back if you want. For example, head(8) for the first 8 rows in the dataset. 2b) .shape() returns the number of rows and columns of the data 2c) .describe() can be used to explore some basic statistical details, for example, mean, standard deviation, and percentiles. 3) Plotting maps in Geopandas Write a few lines of python code to overlay and display the three datasets in one map. Hint, you will need to set up the subplots using Matplotlib and pass the axis to Geopandas .plot() function.

**Coordinate systems and Projections:** Objectives: 1) Explore the projection information of datasets 2) Set/Re-project the coordinate reference systems (CRS) of datasets Steps: 1) Explore the projection information of datasets Write a few lines of python code to print out the coordinate system information of the the datasets you have loaded from the assignment folder. 2) Reroject the datasets into Mercator Projection (EPSG:3395) Write a few lines of python code to reproject the datasets to Mercator Projection (EPSG:3395). 3) Visualize the reprojected datasets on a map. Write a few lines of python code to overlay and visualize the reprojected datasets on a map.

VIII. **Student Learning Outcomes:**

1. Demonstrate the understanding of the fundamentals of Python for Geospatial methods and mapping techniques.
2. Demonstrate the ability to frame spatial questions that can be explored using Python and to use Python methods to obtain and analyze necessary data to answer the questions.
3. Create maps and visualizations to support analytical insights with Python

## GIS 28 Distance Education Application

☑ Fully Online

**1a. Instructor - Student Interaction:**
All of the course expectations and requirements will be outlined in the syllabus and sent to students via announcements. The instructor will regularly send out multiple announcements to the class every week regarding the weekly content, tasks, resources, and tips. Each unit will contain a discussion forum for students to post questions. The instructor will monitor the discussion forum every day and respond promptly to provide help to students as needed. Students can also email the instructor via the course inbox or directly through email for any personal questions or extra help. All graded student assignments will provide a rubric explaining the grade received and the instructor will give additional comments with recommendations, feedback, and tips to help students improve their remote sensing skills. An overview video will help students learn how to navigate the course and its content. Weekly office hours are provided by appointment (i.e. student request) at the request of the student. The student can have virtual face-to-face individual interaction (skype, zoom, or by phone) with the instructor to ask for additional clarification and assistance. With the ability to share computer screens via online appointments, the instructor is able to provide more individualized assistance as you would receive in person.

**1b. Student - Student Interaction:**
Students will be able to help one another through discussion forums and group work. To facilitate collaborative learning, students are encouraged to contribute to the course discussion forums by both asking and answering questions regarding the course material and weekly assignments. They will also be assigned into lab groups to work on coding assignments. Additionally, students are also invited to participate in peer review on the assignments. This will enable further student-to-student interaction as well as expose them to the process and outcomes that other students undertake.

**1c. Student - Content Interaction:**
Students will interact with materials through the online learning platform (e.g. LMS). Every week, a new unit will be released, with various text headers organizing the content through conceptual lectures, technical screencasts and videos, assignment instructions, resources, and a discussion forum. The mix of both conceptual and technical videos provides both knowledge and operational skills and helps students complete their weekly assignments. Every few weeks, a graded quiz will assess their comprehension of the material. Detailed grading rubrics with additional instructor comments will give individualized feedback and learning opportunities. In addition to lecture content, supplemental information such as external links, readings, and resources provide various modes of information to address different learning styles.

**1d. Distance Ed Interactions:**

| Online class activities that promote class interaction and engagement | Brief Description | Percentage of Online Course Hours |
|---|---|---|
| Online Lecture | Online PowerPoint and video presentations with python markdown notes. | 20.00% |
| Discussion Boards | Students will be required to respond to questions posted both by the instructor and other students | 20.00% |
| Peer Feedback | Students will be randomly assigned to review other students' coding work and provide feedback. | 10.00% |
| Exams | Online exam/quizzes will be given after every unit and exams will be given after every module. | 20.00% |
| Project Presentation | Students will work independently on a final coding project. They will also be assigned to different groups to provide comments and suggestions to each other. | 30.00% |

**2. Organization of Content:**
The course includes conceptual and technical information and communication/collaboration features that coincide with student learning outcomes specified in the course outline. The course is divided into modules or units that coincide with those concepts and objectives described in the course outline. A typical instructional module includes (1) overview of the

expectations and materials covered in the unit; (2) content for review including resources and a conceptual video lecture; (3) technical screencasts and videos walking students through a remote sensing exercise that will help them complete and master the remote sensing skills to complete their assignment; (4) a graded assignment with instructions, links to data, and references for specific tools they will utilize; (5) occasional quizzes to test their comprehension of the material; (6) discussion forum; (7) other course-specific components as necessary. The material is presented through the available technologies. Assignment activities allow students to assess their performance and progress in each module at their own pace within the general deadlines provided. Class activities provide immediate feedback to ensure progressive involvement and successful completion of each module.

**3. Assessments:**

| % of grade | Activity | Assessment Method |
|---|---|---|
| 30.00% | Home work and Group discussions | Students will have 10 homework assignments for practicing basic concepts and coding skills. They will also participate in group discussion 1) to share the understanding of the key concepts; 2) to comment on each other's coding work; 3) to inspire each other in the final projects. |
| 25.00% | Lab Reports | Students will complete 5 labs to practice coding skills for geospatial analysis and visualization. |
| 20.00% | Quizzes/Exams | Students will finish 5 module quizzes to evaluate the knowledge and skills learned in each module. Each quiz contains various question types, such as multiple choice questions, short written essay questions, fill-in-blank questions, etc. |
| 25.00% | Final projects | Student will finish a final project to demonstrate the understanding to the key concepts and demonstrate the python coding skills. |

**4. Instructor's Technical Qualifications:**
The instructor should be familiar with SMC online learning system (LMS) to manage the online class. He/She should also be able to use the Citrix Server in SMC to guide students in using the GIS software installed on the server.

**5. Student Support Services:**
Website links to SMC library, bookstore, DSPS, Admissions, Financial Aid, Tutoring Center, Wellness and Well-being, Counseling, and Earth Science Department will be posted on the class website. In addition, useful links to GIS data sources, articles, software online help documents and other professional discussion forum will be posted on the class website.

**6. Accessibility Requirements:**
All online course materials including lecture presentations, videos, assignments and other assessment forms, will be made accessible by incorporating design features such as alternative text, headings for data tables, and skip navigation. Outside web links to additional materials that are appropriate for the course will likewise be accessible to all students.

**7. Representative Online Lesson or Activity:**
Students will be provided the following hypothetical scenario in a lab assignment:
You are a Starbucks big data analyst looking to find the best location for the next store in Los Angeles. The store is a reserve roaster, which is much larger than a typical Starbucks store and has several additional features, including various food and wine options, along with upscale lounge areas. You'll investigate the demographics of various counties in the state of California, to determine potentially suitable locations.
Datasets that are needed for this lab are provided.

Students will be assigned to different groups to work together. They will first come up with a plan independently and assigned to peer-review another student's plan. Based on the coding plan and peers' suggestions, they will first finish a python script independently to solve the problem; then they will exchange their coding work to help each other fix coding bugs.

# Pre/corequisite Checklist and Worksheet: GIS 28 Introduction to Python for GIS

**Prerequisite:** GEOG/GIS 20; Introduction to Geographic Information Systems

**SECTION 1 - CONTENT REVIEW:** If any criterion is not met, the prerequisite will be disallowed.

| Criterion | Met | Not Met |
|---|---|---|
| 1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory. | X | |
| 2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards. | X | |
| 3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria. | X | |
| 4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format. | X | |
| 5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing. | X | |
| 6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite. | X | |
| 7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory. | X | |
| 8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite. | X | |
| 9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files. | X | |

**SECTION II - ADDITIONAL LEVEL OF SCRUTINY:**

**X** Type 4: Program prerequisites
**Prerequisite must be required for at least one of the courses in the program. Explain:**

## ENTRANCE SKILLS FOR **GIS 28**

*(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)*

| | |
|---|---|
| A) | the fundamental knowledge of GIS and other related geospatial technologies including RS, GPS and Cartography |
| B) | Ability to comprehend maps and to manipulate spatially-oriented data in a map format |
| C) | Ability to recognize and identify geographic data's four components, and to aid in retrieving, manipulating, analyzing and displaying spatially-referenced data. |
| D) | Ability to operate GIS software and associated hardware |
| E) | the knowledge of geospatial data sources and the ability to use online tools for geospatial analysis. |

## EXIT SKILLS (objectives) FOR **GEOG/GIS 20**

*(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)*

| | |
|---|---|
| 1. | the fundamental knowledge of GIS and other related geospatial technologies including RS, GPS and Cartography |
| 2. | Ability to comprehend maps and to manipulate spatially-oriented data in a map format |
| 3. | Ability to recognize and identify geographic data's four components, and to aid in retrieving, manipulating, analyzing and displaying spatially-referenced data. |
| 4. | Ability to operate GIS software and associated hardware |
| 5. | the knowledge of geospatial data sources and the ability to use online tools for geospatial analysis. |

| | ENTRANCE SKILLS FOR (GIS 28 ) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H |
| EXIT SKILLS FOR (GIS 20) | 1 | X | | | | | | | |
| | 2 | | X | | | | | | |
| | 3 | | | X | | | | | |
| | 4 | | | | X | | | | |
| | 5 | | | | | X | | | |

# Modify Course: COMPUTER APPLICATIONS 35B, QuickBooks Online

| | |
|---|---|
| **Units:** | 3.00 |
| **Total Instructional Hours (usually 18 per unit):** | 54.00 |
| **Hours per week (full semester equivalent) in Lecture:** | 3.00 |
| **In-Class Lab:** | 0.00 |
| **Arranged:** | 0.00 |
| **Outside-of-Class Hours:** | 108.00 |
| **Transferability:** | Transfers to CSU |
| **Degree Applicability:** | Credit - Degree Applicable |
| **Skills Advisory(s):** | ACCTG 1 or ACCTG 21 CIS 1 or CIS 4 |

I. **Catalog Description**

This course provides the student with a business approach to computerized, integrated accounting principles using QuickBooks Online. Students will work with the various components of an accounting system by setting up an accounting system for a new company. Topics include the creation of a QuickBooks company, processing daily accounting entries, working with payroll online, maintaining inventory, the creation, and the analysis of financial statements and other managerial reports. Hands-on experience is provided. This class covers the objectives necessary for QuickBooks Online certification and QuickBooks ProAdvisor.

II. **Examples of Appropriate Text or Other Required Reading:**

(include all publication dates; for transferable courses at least one text should have been published within the last five years)

1. Computerized Accounting with QuickBooks Online , 2021 Update, Williams & Johnson, Cambridge © 2021, ISBN: 978-1-61853-430-9
2. QuickBooks Online. Intuit, 2022 ed.
3. Microsoft Office 365. Microsoft, 365 ed.
4. Adobe Reader. Adobe, DC ed.
5. Adobe Reader

III. **Course Objectives**

Upon completion of this course, the student will be able to:

1. Navigate QuickBooks Online
2. Create a new company using QuickBooks Online
3. Manage accounts and settings
4. Set up and modify the lists and users profile
5. Demonstrate how to enter and update vendors' profile, purchases, and pay bills
6. Demonstrate how to enter and update customers' profile, sales receipts and invoices, and record customer payments
7. Demonstrate how to enter timesheets, process payroll checks, and other payroll related transactions
8. Prepare bank reconciliation and work with other banking tools
9. Complete the accounting cycle and manage the tracking system
10. Prepare and analyze various financial and business reports.
11. Identify Apps that works on QuickBooks Online environment
12. Use the tools available for QuickBooks Online Accountant

IV. **Methods of Presentation:**

Projects, Observation and Demonstration, Online instructor-provided resources, Lecture and Discussion, Group Work, Other Methods: Classroom lectures, demonstrations, and discussions will be used to introduce students to each new feature in QuickBooks Online. Instructor guided and individual hands-on practice using textbook exercises and "real world" examples will be provided in the classroom, giving students the opportunity to ask questions, clarify concepts, and receive individual guidance. Homework assignments are designed to assist students in mastering previously learned skills and explore new concepts prior to their presentation in class.

V. **Course Content**

| % of Course | Topic |
|---|---|
| 5.000% | Getting started with QuickBooks Online |

| | |
|---|---|
| 10.000% | Setting up a new company file |
| 10.000% | Managing Accounts and Settings |
| 5.000% | Setting up and Modifying Lists and Users |
| 10.000% | Working with Vendors |
| 10.000% | Working with Customers |
| 10.000% | Using payroll in QuickBooks Online |
| 10.000% | Banking and Credit Card Transactions |
| 10.000% | Creating and Analyzing Reports |
| 10.000% | Completing the accounting cycle and managing the tracking system |
| 5.000% | Using tools available to QuickBooks Online Accountant |
| 5.000% | Identify Apps that Works on QuickBooks Online Environment |
| 100.000% | Total |

VI. **Methods of Evaluation**

| **% of Course** | **Topic** |
|---|---|
| 10% | Class Participation |
| 20% | Exams/Tests: There will be a midterm and final exam. |
| 50% | Homework: There will be from 8-10 project assignments |
| 10% | Quizzes: There will be between 10 to 12 practice tests. |
| 10% | Final Project |
| 100% | Total |

VII. **Sample Assignments:**

**Assignment 1:** Scenario: Printing Financial Statements. While working at your computer, you notice Mr. Castle heading toward you. Adding another stack of papers to your overflowing inbox, he says, I need a profit and loss statement and a balance sheet for November as soon as possible; I have not seen any financial statements since our former accountant left. As he walks away, Mr. Castle calls over his shoulder. From now on I like a P&L and balance sheet on my desk by the first of each month. Your job is now to create these two financial statements from the file that has been provided to you and print the statements for Mr. Castle.

**Assignment 2:** Scenario: Chart of Accounts, Customer List, Vendor List, and Item List Villa Floor; Carpet, a start-up business, provides custom hardwood floor cleaning and refinishing; In addition, the business provides specialized cleaning of fine oriental rugs. First, set up a new QuickBooks company file for Villa Floor; Carpet using the EasyStep Interview; Then create the Customer list, Vendor list, and the Item list for the new company with the information provided.

VIII. **Student Learning Outcomes:**

1. Given the accounting data, enter financial data using QuickBooks Online to create various financial statements and reports for small business entities.
2. Given the accounting data, complete bank reconciliations and enter payroll using the tools offered through QuickBooks Online or its additional required Apps.

# ADVISORY Checklist and Worksheet: CIS 35B
**Proposed Advisory: CIS 1**

**SECTION 1 - CONTENT REVIEW:**

| Criterion | N/A | Yes | No |
|---|---|---|---|
| 1. Faculty with appropriate expertise have been involved in the determination of the advisory. | | **X** | |
| 2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards. | | **X** | |
| 3. Selection of this advisory is based on tests, the type and number of examinations, and grading criteria. | | **X** | |
| 4. Selection of this advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format. | | **X** | |
| 5. The body of knowledge and/or skills which are recommended for success before enrollment have been specified in writing (see below). | | **X** | |
| 6. The course materials presented in this advisory have been reviewed and determined to teach knowledge or skills recommended for success in the course requiring this advisory. | | **X** | |
| 7. The body of knowledge and/or skills recommended for success in this course have been matched with the knowledge and skills developed by the advisory course. | | **X** | |
| 8. The body of knowledge and/or skills taught in the advisor are not an instructional unit of this course. | | **X** | |
| 9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files. | | **X** | |

## ENTRANCE SKILLS RECOMMENDED FOR SUCCESS IN: **CIS 35B**
*(It is recommended that the student to be able to do or understand the following BEFORE entering the course)*

| | |
|---|---|
| A) | Identify the components of a computer; explain how a computer works; describe computer input and output; and identify input and output devices as well as mobile devices. |
| B) | Identify and explain system software, including Windows and OS X operating systems and applications software, including word processing, spreadsheet, presentation and database programs. |
| C) | Explain how computers are used in business as well as their use in business communication, including email, as well as describe business information systems. |
| D) | Demonstrate the use of operating systems, web browsers, web-based word processing and spreadsheet applications, coding, and web-based social media applications. |

## EXIT SKILLS (objectives) FROM: **CIS 1**
*(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)*

| | |
|---|---|
| 1. | Identify the components of a computer; explain how a computer works; describe computer input and output; and identify input and output devices as well as mobile devices. |
| 2. | Identify and explain system software, including Windows and OS X operating systems and applications software, including word processing, spreadsheet, presentation and database programs. |
| 3. | Explain how computers are used in business as well as their use in business communication, including email, as well as describe business information systems. |
| 4. | Demonstrate the use of operating systems, web browsers, web-based word processing and spreadsheet applications, coding, and web-based social media applications. |

| | ENTRANCE SKILLS FOR: **CIS 35B** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| EXIT SKILLS From: CIS 1 | | A | B | C | D | E | F | G | H |
| | 1 | X | | | | | | | |
| | 2 | | X | | | | | | |
| | 3 | | | X | | | | | |
| | 4 | | | | X | | | | |
| | 5 | | | | | | | | |
| | 6 | | | | | | | | |
| | 7 | | | | | | | | |
| | 8 | | | | | | | | |