Agenda Item #16-10
Effective Summer 2016
Revised, Effective Fall 2016

Eastern Illinois University
Revised Course Proposal
GEO 2450G: Oceanography

Banner/Catalog Information (Coversheet)

1. __ New Course or **X** Revision of Existing Course

2. Course prefix and number: **GEO 2450G**

3. Short title: **Oceanography**

4. Long title: **Oceanography**

5. Hours per week: **3** Class **0** Lab **3** Credit

6. Terms: **X** Fall **X** Spring **X** Summer ___ On demand

7. Initial term: ___ Fall ___ Spring **X** Summer Year: **2016**

8. Catalog course description: **Integrated descriptive study of the world oceans including the physics, chemistry, biology, and geology of the marine environment as well as the interrelationship between the world oceans and human activities.**

9. Course attributes
   General education component: **Scientific Awareness (Physical Sciences – Earth Science)**
   __ Cultural diversity __ Honors __ Writing centered __ Writing intensive _X_Writing active

10. Instructional delivery
    Type of Course:
    X Lecture ___ Lab ___ Lecture/lab combined ___ Independent study/research
    ___ Internship ___ Performance ___ Practicum/clinical ___ Other, specify: _____
    Mode(s) of Delivery:
    X Face to Face **X** Online ___ Study Abroad
    X Hybrid, specify approximate amount of on-line and face-to-face instruction **format will be dependent on nature of hybridization.**

11. Course(s) to be deleted from the catalog once this course is approved. **Not applicable**

12. Equivalent course(s): **No equivalent courses**
    a. Are students allowed to take equivalent course(s) for credit? ___ Yes ___ No

13. Prerequisite(s): **No prerequisites**

a. Can prerequisite be taken concurrently? ___ Yes ___ No

b. Minimum grade required for the prerequisite course(s)? ___

c. Use Banner coding to enforce prerequisite course(s)? ___ Yes ___ No

d. Who may waive prerequisite(s)?

___ No one ___ Chair ___ Instructor ___ Advisor ___ Other (specify)

14. Co-requisite(s): **No co-requisites**

15. Enrollment restrictions

a. Degrees, colleges, majors, levels, classes which may take the course: **All**

Will ask that online sections be coded (restricted) to off-campus students only.

b. Degrees, colleges, majors, levels, classes which may not take the course: **None**

16. Repeat status: **X** May not be repeated ___ May be repeated once with credit

17. Enter the limit, if any, on hours which may be applied to a major or minor: **3**

18. Grading methods: **X** Standard ___ CR/NC __ Audit ___ ABC/NC

19. Special grading provisions:

___ Grade for course will not count in a student's grade point average.

___ Grade for course will not count in hours toward graduation.

___ Grade for course will be removed from GPA if student already has credit for or is registered in: _____

___ Credit hours for course will be removed from student's hours toward graduation if student already has credit for or is registered in: _____

20. Additional costs to students:

Supplemental Materials or Software_____

Course Fee ___No **X** Yes, Explain if yes: **A $5 course fee has already been approved by the President's Council.**

21. Community college transfer:

X A community college course may be judged equivalent.

__ A community college may not be judged equivalent.

Note: Upper division credit (3000+) will not be granted for a community college course, even if the content is judged to be equivalent.

Rationale, Justifications, and Assurances (Part I)

1. X Course is required for the major(s) of **Science with Teacher Licensure (B.S.)**
   X Course is required for the minor(s) of **Earth Science**
   ___Course is required for the certificate program(s) of _____
   X Course is used as an elective **Broadcast Meteorology; Environmental Studies; Geography: Environmental/Physical Geography Option; and Geography: Human Geography Option.**

2. Rationale for proposal: **This is a revision to the current ESC/GEL 2450G course, already part of the University's General Education program, in order to allow the course to be offered in its traditional format (face-to-face) as well as in online and hybrid formats. The new formats will allow for increased enrollment and more frequent offerings.**

3. Justifications for (answer N/A if not applicable)
   Similarity to other courses: **N/A**
   Prerequisites: **N/A**
   Co-requisites: **N/A**
   Enrollment restrictions: **N/A**
   Writing active, intensive, centered: **GEO 2450G is listed as a Writing Active (WA) course owing to the term paper related to the topic of oceanography, as well as several brief writing assignments and writing activities, such as short in-class writing assignments, short answer questions (requiring multiple sentences) on tests or quizzes, and homework assignments requiring writing. Students are required to submit a term paper of at least 3 pages. Paper includes in-text citations as well as references cited page. Annotated bibliography of the paper are due prior to the final paper submission in order to allow feedback.**

4. General education assurances (answer N/A if not applicable)
   General education component: **Scientific Awareness: This class will encourage students to think critically about scientific issues and phenomena in the context of marine environments. Students will improve their scientific literacy and develop the capacity to apply the scientific method to oceanographic phenomena**.
   Curriculum: **Students will satisfy the following learning objectives of the University's Undergraduate Learning Goals:**
   Critical Thinking (CT): all goals - CT1 – CT6.
   Writing and Critical Reading (WR): all goals - WR1 – WR7.
   Speaking and Listening (SL): Not assessed.
   Quantitative Reasoning (QR): QR3, QR4, and QR5; QR1 and QR2 are not assessed.
   Responsible Citizenship (RC): RC1, RC2, and RC4; RC 3 is not assessed.
   Instruction**: Lectures, discussions, writing, use of technology, and use of large data sets and visualizations will be used as instructional methodologies used to satisfy University Learning Goals.**

Assessment: **Utilizing Bloom's Taxonomy, students will be asked to remember, understand, apply, analyze, evaluate, and finally create through a variety of assessment tools such as the term paper, tests, discussions, and activities incorporating authentic data.**

5. Online/Hybrid delivery justification & assurances (answer N/A if not applicable)

Online or hybrid delivery justification: **This course may be offered online and hybrid formats in order to allow students not living near Charleston to enroll in the course. Allowing the multiple delivery methods will allow the department to better serve the needs of its students and the citizens of the state.**

Instruction: **All supplemental materials (e.g., syllabi, lecture notes, handouts, access to case studies and data sets) will be placed into a Learning Management System (LMS), such as Desire2Learn (D2L®), currently being used by the University. Links to appropriate articles, journals, and web sites will also be placed on the LMS. Online discussions will take place using the D2L® Chat and Discussion options. Online videos will be provided (e.g., through YouTube®) that will supplement course lectures. All faculty who deliver this course online are/will be OCDI (or appropriate equivalent) trained.**

Integrity: **All written assignments will be run through D2L®'s Originality Checking software or similar software such as Turnitin® if the LMS in use does not have such capabilities. Such technologies will be used in all delivery formats. Examinations will also be given in the online delivery format and can be regulated so that students must positively log into their accounts to take the test with browsers locked down. Test time can be limited to the same amount of time in a tradition delivery format, or increased depending on accommodation required by the student. Tests will also be designed such that simply looking up an answer in the book is not feasible for online and hybrid delivery formats. Such an approach also assesses high order thinking skills.**

Interaction: **Instructor-student and student-student interactions will make use of the LMS's chat and discussion features, both of which currently allow anonymous posting if the instructor deems it will help the students. Additionally, email is available. Online office hours will be available for students in the online and hybrid courses. Utilizing the LMS or other software (e.g., Google Hangouts® and Google Chats®) may be used if needed, or appropriate.**

Model Syllabus (Part II)

Please include the following information:

1. Course number and title: **GEO 2450G – Oceanography**

2. Catalog description: **Integrated descriptive study of the world oceans including the physics, chemistry, biology, and geology of the marine environment as well as the interrelationship between the world oceans and human activities.**

3. Learning objectives.
   a. **Analyze and evaluate scientific data to create conclusions about oceanographic processes. CT1-6; QR3-4.**
   b. **Provide examples of the interdisciplinary nature of oceanography. CT1-6**
   c. **Articulate scientific arguments as to why the oceans matter. CT6; WR1-7.**
   d. **Explain interrelationships of oceans to other Earth Systems. QR3, QR5, QR6; RC1, 4.**
   e. **Evaluate the interaction between humans and the ocean. CT1-6; WR1-7; QR3, 5.**
   f. **Use scientific process skills at a basic level. QR3-5.**
   g. **Relate scales and rates of ocean and ocean processes. QR3-5.**
   h. **Develop and communicate conceptual models of the ocean. WR1-7.**
   i. **Explain how physical and chemical factors in the ocean affect the climate in the past, present and future. RC1-2, 4.**

4. Course materials.
   a. **Text: Trujillo, Alan P., and Harold V. Thurman. *Essentials of Oceanography*. 11th ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2014. ISBN-10: 0321814053; ISBN-13: 9780321814050. 2014.**
   b. **Additional, free, web sites from the National Oceanographic and Atmospheric Administration (NOAA), United States Geological Survey (USGS), Monterey Bay Aquarium Research Institute (MBRI), and Mote Marine Laboratory (MML) will be utilized for data and short videos. NOTE: close-captioned videos and/or transcripts will be provided.**

5. Weekly outline of content.

Week 1. Introduction to Planet "Earth"
Week 2. Plate Tectonics and the Ocean Floor
End of Week #2 - Quiz #1
Week 3. Marine Provinces
Week 4. Marine Sediments
End of Week #4 - Quiz #2
Week 5. Water and Seawater
Week 6. Air–Sea Interaction
Beginning of Week #6 – Annotated Bibliography Due
End of Week #6 - Quiz #3
Week 7. Ocean Circulation
Week 8. Waves and Water Dynamics
End of Week #8 - Mid-term Examination
Week 9. Tides
Week 10. The Coast: Beaches and Shoreline Processes
Beginning of Week #10 - Rough Draft of Paper Due
End of Week #10 - Quiz #4
Week 11. The Coastal Ocean
Week 12. Marine Life and the Marine Environment
End of Week #12 - Quiz #5

Week 13. Biological Productivity and Energy Transfer
Week 14. Animals of the Benthic and Pelagic Environments
Beginning of Week #14 – Papers Due
End of Week #14 - Quiz #6
Week 15. The Oceans and Climate Change
Week 16: Examination Week - Final Examination.

6. Assignments and evaluation, including weights for final course grade.
Quizzes, mid-term examination, and final examination include short-answer / essay style questions that may ask the students to evaluate a diagram and data or to draw a diagram based on given criteria. As such, <u>many of the learning objectives may be assessed during a quiz or examination</u>. The term paper (rough draft included) may assess <u>any to all learning goals based on the paper's topic</u>.

Item	Individual Point Value	Total Point Value	Percentage of Total Grade	Evaluation Goals Assessed
Quizzes (6)	50	300	30.30	CT, QR, (WR), (RC)
Mid-Term (1)	100	100	10.10	CT, QR, (WR), (RC)
Final Examination (1)	200	200	20.20	CT, QR, (WR), (RC)
Annotated Bibliography (1)	25	25	2.53	WR
Rough Draft of Paper (1)	25	25	2.53	CT, WR, (QR), (RC)
Paper (1)	100	100	10.10	CT, WR, (QR), (RC)
Weekly News Summaries (12)	20	240	24.24	WR, (QR)
	Total Point Value	990	100.00	

7. Grading scale. **The approximate grading scale used will be ≥ 90% = A; B ≥ 80%; C ≥ 70%; D ≥ 60%; < 60% = F.**

8. Correlation of learning objectives to assignments and evaluation.

Learning Objective	Quizzes	Mid-term	Final Exam	Annontated Bibliography	Rough Draft	Final Paper	News Summaries
II.3 A: Analyze and evaluate scientific data to create conclusions about oceanographic processes	X	X	X		X	X	X
II.3 B: Provide examples of the interdisciplinary nature of oceanography.	X	X	X	X			X

Learning Objective	Quizzes	Mid-term	Final Exam	Annontated Bibliography	Rough Draft	Final Paper	News Summaries
II.3 C: Articulate scientific arguments as to why the oceans matter.	X	X	X	X	X	X	X
II.3 D: Explain interrelationships of oceans to other Earth Systems.	X	X	X		X	X	X
II.3 E: Evaluate the interaction between humans and the ocean.	X	X	X	X	X	X	X
II.3 F: Use scientific process skills at a basic level.	X	X	X		X	X	
II.3 G: Relate scales and rates of ocean and ocean processes.	X	X	X		X	X	
II.3 H: Develop and communicate conceptual models of the ocean.	X	X	X		X	X	X
II.3 I: Explain how physical and chemical factors in the ocean affect the climate in the past, present and future.	X	X	X		X	X	X

Date approved by the Department of Geology/Geography: 6 November 2015
Date approved by the College of Sciences Curriculum Committee: 11 December 2015
Date approved by CAA: 28 January 2016