Agenda Item #15-110
Effective Summer 2015

Eastern Illinois University
New Course Proposal
BIO 3333G, Sustainable Energy

Banner/Catalog Information (Coversheet)

1. **_X_New Course or _____Revision of Existing Course**
2. **Course prefix and number:** __BIO 3333G_____
3. **Short title:** Sustainable Energy/Environment
4. **Long title:** Sustainable Energy and the Environment
5. **Hours per week:** _3_ Class _0_ Lab _3_ Credit
6. **Terms:** ___ Fall ___ Spring _X_ Summer __ On demand
7. **Initial term**: ___ Fall ___ Spring _X_ Summer Year: _2015_
8. **Catalog course description:** An exploration of current renewable energy technologies, including bioenergy, with emphasis on their environmental impact and sustainability.
9. **Course attributes:**

   General education component: _Scientific Awareness___

   ___ Cultural diversity ___ Honors ___ Writing centered ___ Writing intensive ___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:

    ___ Face to Face _X_ Online ___ Study Abroad

    ___ Hybrid, specify approximate amount of on-line and face-to-face instruction_____

11. Course(s) to be deleted from the catalog once this course is approved. none
12. **Equivalent course(s):** none

    a. Are students allowed to take equivalent course(s) for credit? ___ Yes ___ No

13. **Prerequisite(s):** ___none_____

    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): __none_____

15. Enrollment restrictions

a. Degrees, colleges, majors, levels, classes which <u>may</u> take the course: Off-campus students that are non-Biological Sciences majors and minors

b. Degrees, colleges, majors, levels, classes which may <u>not</u> take the course: Biological Sciences Majors and Minors; on-campus students

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: __

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__none_____

Course Fee _X_No ___Yes, Explain if yes_____

21. Community college transfer:

___ A community college course may be judged equivalent.

_X_ 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. ___Course is required for the major(s) of _____
   ___Course is required for the minor(s) of _____
   ___Course is required for the certificate program(s) of _____
   _X_ Course is used as an elective
2. **Rationale for proposal**: This course is in keeping with the Sustainable Energy theme at EIU, and was supported by the College of Sciences via the Increasing Distance Education in the Sciences (IDEAS) grant to Dr. Canam (Biological Sciences). Also, EIU is in need of more scientific awareness courses that are available online in order to better serve our non-traditional and General Education student populations.
3. **Justifications for (answer N/A if not applicable)**
   Similarity to other courses: N/A
   Prerequisites: N/A
   Co-requisites: N/A
   Enrollment restrictions: As a general education course, it will not count towards the Biological Sciences Major/Minor. As an online course, only off-campus students may enroll.
   Writing active, intensive, centered: N/A
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 energy production and sustainability of the planet. Students will improve their scientific literacy and develop the capacity to apply the scientific method to their everyday lives.
   Curriculum: Please see Part II.3 and II.8 for learning objectives and their relation to the official learning goals at EIU.
   Instruction: This course will be delivered asynchronously online, yet students will engage in written discussions using D2L discussion forums. They will also have access to course materials (*e.g.* PowerPoint lectures and videos) that will allow them to achieve the learning objectives specified in Part II.3.
   Assessment: Please see Part II.3 and II.8 for learning objectives and their relation to the official learning goals at EIU.
5. **Online/Hybrid delivery justification & assurances (answer N/A if not applicable)**
   Online or hybrid delivery justification: Online delivery will allow students to fully participate in the proposed course without having to be on EIU's main campus. This will provide off-campus students with an opportunity to further their scientific awareness.
   Instruction: This course will be delivered asynchronously, with content (*e.g.* PowerPoint lectures, videos, discussion forums) available at times that are convenient for each student. All faculty who will deliver this course online are/will be OCDI (or appropriate equivalent) trained.
   Integrity: Tests will be taken using the Respondus Lockdown Browser (EIU recommended method) to help prevent academic dishonesty. This browser system prevents the user from

using their computer for anything other than completing the test during the allotted time period. Also, the required essay will be submitted via Turnitin.com (EIU recommended method) to help prevent plagiarism.

Interaction: Students will be required (as part of their course grade) to lead and participate in discussions mediated through Desire2Learn (D2L). They will also have access to the instructor via email and through video conferencing (by appointment).

Model Syllabus (Part II)

1. **Course number and title:** BIO 3333G, Sustainable Energy and the Environment
2. **Catalog description:** An exploration of current renewable energy technologies, including bioenergy, with emphasis on their environmental impact and sustainability. This course does not count toward a Biological Sciences major or minor.
3. **Learning objectives:**
   A. Engage in discussions relating to topics in sustainable energy (CT 1-6, WR 2,5,6, RC 1,2,4)
   B. Understand the meaning of sustainability, and how humans and societies influence energy production, use and conservation (CT 1-6, RC 1,2,4)
   C. Develop an appreciation for the complex set of variables (*e.g.* human activity, policy, environment) that influence sustainability (RC 1,2,4)
   D. Investigate and interpret the existing data and trends regarding sustainable energy (CT 1-6, QR 1-6)
   E. Research a sustainable energy topic and present the information in written format (CT 1-6, WR 1-7, RC 1,2,4)
4. **Course materials:** Wright, R.T., and Boorse, D.F. (2013) Environmental Science: Toward a Sustainable Future. San Francisco, CA: Pearson Benjamin Cummings. ISBN: 0321811534.
5. **Weekly outline of content:**

Week	Dates (2015)	Topic	Chapter	Exams	Class Time (hours)
1	June 15-21	Framework for a Sustainable Future	1 and 2		5
2	June 22-28	Organisms and their Environment	3, 4, 5 and 6	Test	5
3	June 29-July 5	Human Population and Resources	8 and 9	Test	5
4	July 6-12	Energy for Human Society	14 and 15	Test	5
5	July 13-19	Atmospheric Pollution and Climate Change	18 and 19	Test	5
6	July 20-26	Renewable Energy	16	Test	5
7	July 27-August 2	Waste and Pollution	20, 21, 22	Test	5
8	August 3-7	Sustainable Communities and Lifestyles	23	Test	3
					total: 38

6. **Assignments and evaluation, including weights for final course grade:**

Tests (Weeks 2-8)	70%
Essay	15%
Discussion Leading	5%
Discussion Participation	10%
Total	*100%*

7. **Grading scale:** A = 90 to 100 %, B = 80 to 89%, C = 70 to 79%, D = 60 to 69%, F < 60%
8. **Correlation of learning objectives to assignments and evaluation:**

Learning Objective (from II.3)	Tests	Essay	Discussions
A			X
B	X	X	X
C	X	X	X
D	X	X	X
E		X	

Date approved by Biological Sciences: 12 March 2015
Date approved by COSCC: April 3, 2015
Date approved by CAA: April 30, 2015