

**DOCUMENT N: COURSE AND PROGRAM DEVELOPMENT COVER SHEET**

See Course and Program Development Policy and Procedures for Instructions

<b>SCHOOL:</b> LAW <input type="checkbox"/> MSB <input type="checkbox"/> YGCLA <input checked="" type="checkbox"/>	<b>Contact Name:</b> Stanley J. Kemp	<b>Phone:</b> 5094
<b>DEPARTMENT / DIVISION:</b> Division of Liberal Studies		
<b>SHORT DESCRIPTION OF PROPOSAL</b> (state name of action item 1-20 and course name, code & number / program affected):		
ENVS 221: Science of the Environment (4 credits) <i>NEW COURSE</i>		
<b>PROPOSED SEMESTER OF IMPLEMENTATION:</b> Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Year: 2008 <i>9</i>		

<b>Box 1: TYPE OF ACTION</b>	ADD(NEW) <input checked="" type="checkbox"/>	DEACTIVATE <input type="checkbox"/>	MODIFY <input type="checkbox"/>	OTHER <input type="checkbox"/>
<b>Box 2: LEVEL OF ACTION</b>	Non-Credit <input type="checkbox"/>	Undergraduate <input checked="" type="checkbox"/>	Graduate <input type="checkbox"/>	OTHER <input type="checkbox"/>

<b>Box 3: ACTION ITEM</b> (check appropriate boxes)		DOCUMENTS REQUIRED (see box 4 below)	IMPACT REVIEWS (see box 5 on back)	APPROVAL SEQUENCE (see box 6 on back)
	1. Experimental Course <sup>1</sup>	NO	a, c, e	AC
	2. Course Title	NO		ABCD
	3. Course Credits	NO		ABCD
	4. Course Number	NO		ABCD
	5. Course Level	NO		ABCD
	6. Pre & Co-Requisite	NO		ABCD
	7. Course Description	NO		ABCDEF
X	8. New Course	NO		ABCDEF
	9. Deactivate a Course	NO		ABCDEF
	10. Program Requirements	NO	b, c, d, e	ABCDEF
	11a. UG Specialization (24 credits or less)	NO	a, b, c, d, e	ABCDEF
	11b. Masters Specialization (12 credits or less)	NO	a, b, c, d, e	ABCDEF
	11c. Doctoral Specialization (18 credits or less)	NO	a, b, e	ABCDEF
	12. Closed Site Program	NOT	e	ABCDHIK
	13. Program Suspension <sup>9</sup>	NO,5	a, e	ABCDEGIK
	14a. Certificate Program (ug/g) exclusively within existing degree program	NO	a, c, e	ABCDEFHIK
	14b. Certificate Program (ug/g) where degree programs do not exist or where courses are selected across degree programs (12 or more credits)	NOQR, 6	a, c, e	ABCDEFHJL
	15. Off-Campus Delivery of Existing Program	NO, 4	a, b, c, e	ABCDHIL
	16a. UG Concentration (exceeds 24 credit hours)	NO, 5	a, c, d, e	ABCDEFHJL
	16b. Masters Concentration (exceeds 12 credit hours)	NO, 5	a, c, d, e	ABCDEFHJL
	16c. Doctoral Concentration (exceeds 18 credit hours)	NO, 5	a, c, d, e	ABCDEFHJL
	17. Program Title Change	NO, 5	a, c, d, e	ABCDEFHJL
	18. Program Termination	NO, 10	d, e	ABCDEFHIK
	19. New Degree Program	NOQR, 3,8	a, c, d, e	ABCDEFHJL
	20. Other	Varies	Varies	Varies

<b>Box 4: DOCUMENTATION (check boxes of documents included)</b>					
X	N. This Cover Sheet		Q. Full 5-page MHEC Proposal		T. Other
X	O. Summary Proposal		R. Financial Tables (MHEC)		
X	P. Course Definition Document		S. Contract		

- Approval of experimental course automatically lapses after two offerings unless permanently approved as a new course.
- Codes: a) Library Services (Langsdale or Law) b) Office of Technology Services c) University Relations d) Admissions
- Letter of Intent is required by USM at least 30 days before a full proposal can be submitted. Letter of Intent requires only the approval of the dean and the provost and is forwarded to USM by the Office of the Provost.
- One-page letter to include: Program title & degree/certificate to be awarded; resources requirements; need and demand; similar programs; method of instruction; and oversight and student services (MHEC requirement)
- One-page letter with description and rationale (MHEC requirement)
- One or two-page document that describes: centrality to mission; market demand; curriculum design; adequacy of faculty resources; and assurance program will be supported with existing resources. (MHEC requirement)
- Learning objectives, assessment strategies; fit with UB strategic plan
- Joint Degree Program or Primary Degree Programs require submission of MOU w/ program proposal. (MHEC requirement)
- Temporary suspension of program to examine future direction; time not to exceed two years. No new students admitted during suspension, but currently enrolled students must be given opportunity to satisfy degree requirements.

**DOCUMENT N: COURSE AND PROGRAM DEVELOPMENT COVER SHEET (Page 2 of 2)**

<b>SCHOOL:</b> LAW <input type="checkbox"/> MSB <input type="checkbox"/> YGCLA <input checked="" type="checkbox"/>
<b>SHORT DESCRIPTION OF PROPOSAL</b> (state name of action item 1-20 and course name, code & number / program affected):
ENVS 221: Science of the Environment (4 credits)

10. Provide:
- evidence that the action is consistent with UB mission and can be implemented within the existing program resources of the institution.
  - proposed date after which no new students will be admitted into the program;
  - accommodation of currently enrolled students in the realization of their degree objectives;
  - treatment of all tenured and non-tenured faculty and other staff in the affected program;
  - reallocation of funds from the budget of the affected program; and
  - existence at other state public institutions of programs to which to redirect students who might have enrolled in the program proposed for abolition.
11. University Council *review* (for a recommendation to the President or back to the Provost) shall be limited to curricular or academic policy issues that may potentially affect the University's mission and strategic planning, or have a significant impact on the generation or allocation of its financial resources.

<b>Box 5: IMPACT REVIEW</b>	<b>SIGNATURES</b> (see procedures for authorized signers)	<b>DATE</b>
a. Library <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached	Director or designee:	
b. OTS <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached	CIO or designee:	
c. University Relations <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached	Director or designee:	
d. Admissions <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached	Director or designee:	
e. Records <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached	Registrar or designee:	

<b>Box 6: APPROVAL SEQUENCE</b>	<b>APPROVAL SIGNATURES</b>	<b>DATE</b>
A. Department / Division	Chair: <i>Carleen Aelredt</i>	10-30-08
B. Final faculty review body within each School	Chair: <i>[Signature]</i>	11/13/08
C. College Dean	Dean: <i>Jay W. [Signature]</i>	11/24/08
D. Provost and Senior Vice President for Academic Affairs	Provost: <i>Marguerite C. Wan for S. Joann</i>	12/01/08
E. Curriculum Review Committee (UFS subcommittee)	Chair: <i>[Signature]</i>	12/3/08
F. University Faculty Senate (UFS option)	Chair:	
G. University Council (see # 11 above)	Chair:	
H. President	President:	
I. Board of Regents – notification only		
J. Board of Regents – approval		
K. MHEC – notification only		
L. MHEC – approval		
M. Middle States Association notification	Required only if the mission of the University is changed by the action	

**DOCUMENT O: SUMMARY PROPOSAL**

See Course and Program Development Policy and Procedures for Instructions

<b>SCHOOL:</b> LAW <input type="checkbox"/> MSB <input type="checkbox"/> YGCLA <input checked="" type="checkbox"/>	<b>Contact Name:</b> Stanley J. Kemp	<b>Phone:</b> 410-837- 5094
<b>DEPARTMENT / DIVISION:</b> Liberal Studies		
<b>SHORT DESCRIPTION OF PROPOSAL</b> (state action item 1-23 and course name & number or program affected):		
#8 – Science of the Environment ENVS 221		
<b>PROPOSED SEMESTER OF IMPLEMENTATION:</b> Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Year: 2009		

O-1: Briefly describe what is being requested:

This is a request to approve a new general education science course, primarily for first and second year students, which fulfills the laboratory requirement, and add it to the curriculum (see document P for details).

For new courses or changes in existing courses (needed by Registrar)

<b>OLD Title:</b>	<b>Course # / HEGIS Code:</b>	<b>Credits:</b>
<b>NEW Title:</b> Science of the Environment	<b>Course # / HEGIS Code:</b> ENVS 221	<b>Credits:</b> 4.0

O-2: Set forth the rationale for the proposal:

The implementation of the first and second year program at the University of Baltimore has necessitated the development of new laboratory and non- laboratory courses to fulfill general science education requirements, as mandated by the State of Maryland. This course will diversify current offerings and will also cover the essential topic of environmental science. Understanding the complex issues related to the earth's changing environment (e.g. climate change, sustainability practices) requires familiarity with multiple scientific disciplines. Students will become aware of the need for and understand the direct effects of practices designed to enhance sustainability, commensurate with the University of Baltimore's commitment to reduce environmental impact.

Document P: Course Definition  
Science of the Environment

1. Date Prepared: October 28, 2008
2. Prepared by: Stanley J. Kemp
3. Department: Yale Gordon College of Liberal Arts
4. Course Numbers: ENVS 221
5. Course Title: Science of the Environment
6. Credit Hours: 4.0
7. Prerequisites: none
8. Course purpose: Science General Education (Laboratory)
9. Rationale:

The implementation of the first and second year program at the University of Baltimore has necessitated the development of new laboratory and non- laboratory courses to fulfill general science education requirements, as mandated by the State of Maryland. This course will diversify current offerings and will also cover the essential topic of environmental science. Understanding the complex issues related to the earth's changing environment (e.g. climate change, sustainability practices) requires familiarity with multiple scientific disciplines. Students will become aware of the need for and understand the direct effects of practices designed to enhance sustainability, commensurate with the University of Baltimore's commitment to reduce environmental impact.

10. Catalog Description:

**THIS COURSE SATISFIES THE LABORATORY GENERAL EDUCATION COURSE REQUIREMENT.**

A survey of a number of scientific disciplines related to the earth's changing environment, including geology, ecology, zoology, hydrology, climatology, and chemistry. These disciplines are integrated to provide a clearer understanding of complex environmental issues, using both local and global case studies. The laboratory portion of the course investigates environmental hypotheses and theories, and introduces students to the techniques of environmental data collection and analysis.

11. Suggested approximate size: 25- 30 students
12. Content outline:

Topics to be covered in the lecture portion of the course include: an introduction to environmental science, basic ecology of populations, communities, and ecosystems, biodiversity, environmental chemistry and anthropogenic pollution, climate science and climate change, geology, watershed and aquatic science, and sustainability topics.

Projected laboratory exercises include both in- lab and field components. Students will measure physical and chemical aspects of the environment using a variety of techniques. Experiments will be conducted to demonstrate the effects of pollution of living plants and animals. Classification and measurement of biodiversity will be introduced by collecting and identifying plants and animals in the field. Also, students will have several computer based labs to investigate climate data analysis using open source data bases, and will test a number of climate based hypotheses.

### 13. Learning Goals:

- I. To learn fundamental concepts and utility of the branches of science which comprise the interdisciplinary field of environmental science (i.e. geology, climate science, ecology, zoology, environmental chemistry, limnology)
- II. At the end of the course the student will be able to draw on material presented to identify human impacts and unsustainable practices on the environment at the local and global scale, and propose alternatives
- III. To identify and describe environmental issues specifically associated with the urban environment, and the specific impacts urbanization has on adjacent ecosystems
- IV. To utilize tools used by environmental scientists for collecting data, and to analyze that data
- V. To construct lab reports in scientific format summarizing and analyzing laboratory and field investigations in environmental science
- VI. To use the process of science to construct and test hypotheses in environmental science

### 14. Assessment strategies

Possible assessment strategies include

- I. Regular noncomprehensive or comprehensive examinations (Learning goals I, II, and III)
- II. Regular quizzes based on material presented in lecture and/ or laboratory (learning goals I, II, and III)
- III. Written laboratory reports in scientific format, and short laboratory exercises (learning goals IV, V and VI)
- IV. Either an end of term oral presentation or term paper on an environmental issue of the student's choice, using a specified amount of peer reviewed literature (learning goal II)
- V. Periodic summaries of news articles describing current issues in environmental science, plus in- class discussion (Learning goals II, III)

15. Suggested text:

Lecture: Environmental Science: A Global Concern, 10th ed.; by Cunningham & Cunningham Saigo; 2008; McGraw Hill, Boston.

Laboratory: Wagner, TP and R Sanford. 2004. Laboratory Manual for Environmental Science. Wiley Publishing.

16. Lab Fees: yes *required.*

## General Education Approval Record

## College of Liberal Arts

(to be used for "certifying" new and existing courses; use information about proposed course)

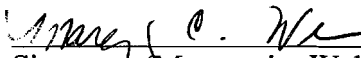
Course: Subject and Number: ENVS 221

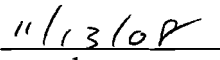
Course Name: Science of the Environment

Division sponsoring the course: Liberal Studies

THIS COURSE SATISFIES THE 4-CREDIT SCIENCE WITH LAB GENERAL EDUCATION REQUIREMENT. This course meets the following learning objectives of that general education requirement:

1. To achieve scientific literacy including proficiency in evaluating reports on science, discriminating among sources, and presenting the concept of peer review;
2. To discriminate science from non-science and to demonstrate that science constitutes the testing of hypotheses about natural phenomena through observation;
3. To know how to access specific scientific information on a topic;
4. To attain familiarity with some of the tools of science and to have opportunities to use technology to gather and process data;
5. To acquire proficiency in the quantitative aspects of science, with an appreciation of the role of variability in the quantitative evaluation of data; and
6. To demonstrate an understanding of the fundamental concepts of the discipline(s).
7. To achieve scientific literacy including proficiency in evaluating reports on science, discriminating among sources, and presenting the concept of peer review;
8. To discriminate science from non-science and to demonstrate that science constitutes the testing of hypotheses about natural phenomena through observation;
9. To know how to access specific scientific information on a topic;
10. To attain familiarity with some of the tools of science and to have opportunities to use technology to gather and process data;
11. To acquire proficiency in the quantitative aspects of science, with an appreciation of the role of variability in the quantitative evaluation of data; and
12. To demonstrate an understanding of the fundamental concepts of the discipline(s).

  
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Signature (Marguerite Weber)

  
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date