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HONORS PROGRAMS
HONORS & UNDERGRADUATE PROGRAMS
A-311 MURPHY HALL
405 HILGARD AVE BOX 951414
LOS ANGELES, CALIFORNIA 90095-1414

April 29, 2013
Scott Chandler, Chair
General Education Governance Committee
A265 Murphy Hall
157101

Attention: Myrna Dee F. Castillo, Program Representative

Dear Professor Chandler:

Please review the course *Understanding Ecology: Finding Interdisciplinary Solutions to Environmental Problems*, taught by Lecturer Alison Lipman, for two general education foundations: Foundations of Scientific Inquiry, and/or Foundations of Society and Culture. The course is currently in CIMS for offering in Fall 2013.

Sincerely,

G/Jennifer Wilson, Ph.D.

Assist. Vice Provost for Honors

UCLA

gjwilson@college.ucla.edu

(310) 825-1752

HONORS COLLEGIUMHONORS COLLEGIUM***

General Education Course Information Sheet Please submit this sheet for each proposed course

Department & Course	Number	HONORS COLLEGIUM 41			
Course Title		Understanding Ecology: Finding Environmental Problems	g Interdisciplinary Sol	utions to	
Indicate if Seminar and	Vor Writing II course	a !			
•	<u>-</u>	area(s) and subgroups(s) for this co	ourse		
Foundation	as of the Arts and H	umanities			
	and Cultural Analys	-	_		
-	hic and Linguistic A	•			
		Analysis and Practice			
Faundatia	ns of Society and Cu	lture	7	X	
	al Analysis	ituic		X	
• Social A	-			X	
7 7 (7 ()	eci + 4*0* T			v	
	ns of Scientific Inqu	iry .		X X	
• Physica		nstration Component must be 5 uni		1	
•	*	nstration Component must be 3 uni		X	
• Life Sci		nstration Component must be 5 uni		<u> </u>	
witt	Laboratory or Demo	nstrution Component must be 3 um			
2. Briefly describe the	rationale for assignn	nent to foundation area(s) and subgr	roup(s) chosen.		
	nge, biodiversity loss	inar that examines the ecological bas, pollution), how these issues affect).
COMBONALIVO SOIGE					
3. "List faculty member Alison Lipman, Le		s instructor (give academic rank):			
Do you intend to u	se graduate student i	nstructors (TAs) in this course?	Yes	No	_X
		If yes, please indicate the number	of TAs		
4. Indicate when do yo	ou anticipate teaching	this course over the next three yea	rs;		
2013-2014	Fall X	Winter	Spring		
2017-2014	Enrollment 20		Enrollment		
2014-2015	Fall X	Winter	Spring		
	Enrollment 20	Enrollment	Enrollment		
2015-2016	Fall X	Winter	Spring		
	Enrollment 20	Enrollment	Enrollment	:	
5. GE Course Units					
Is this an <u>existing</u> co	urse that has been me	odified for inclusion in the new GE	? Yes	_ No _	<u>X</u> .
If yes, provide a brie	f explanation of wha	t has changed.		· ,	
	·				
			.		
				5	
Present Number of U	Jnits:	Proposed Nu	amber of Units:		

6. Please present concise arg	uments for the GE principles applicable to this course.		
X General Knowledge	This is a course that includes a discursive look at society and culture in a way that enhances general knowledge of causes and solutions to environmental problems.		
X Integrative Learning	The course is interdisciplinary including ecology, life sciences, political science, journalism, economics, and sociology.		
X Ethical Implications	Some parts of the course examine ways people, as individuals and as a society, politics, and ecology have affected each other through environmental issues.		
X Cultural Diversity	Many cultural viewpoints addressing global environmental present and future issues are addressed (i.e. international documentaries, popular science articles).		
X Critical Thinking	Students required to think critically about complex concepts of culture, society, and the vast effects of environmental issues throughout a culture		
X Rhetorical Effectiveness	s Writing required and assessed		
X Problem-solving	Course raises issues of "how?" (i.e. How many people know about these environmental issues, and how do we more effectively reach and educate a larger population?) and exhorts students to seek answers.		
X Library & Information Literacy	Course requires library/web research		
(A) CTUDENT CONT	ACT PER WEEK (if not applicable write N/A)		
 Lecture: Discussion Sec Labs: 	tion: (hours) (hours) (hours) (ervice learning, internships, other): (hours) (hours)		
(B) OUT-OF-CLASS	HOURS PER WEEK (if not applicable write N/A)		
 General Review Reading Group Projects Preparation for Information Lit Written Assign 	w & Preparation: 1 (hours) 2 (hours)		
(B) TOTAL Out-of-cl	ass time per week [11] (HOURS)		
	(HOURS)		

COURSE PROPOSAL FOR THE HONORS COLLEGIUM

Instructor: Alison Lipman, Ph.D.

Field of Study: Ecology / Life Sciences

Seminar, four hours per week

a. Course title

Understanding ecology: finding interdisciplinary solutions to environmental problems

b. Course description

The goal of this course is to teach students environmental literacy, through a diverse and integrative curriculum, in an intimate and participatory seminar environment. This class will allow students to explore the ecological basis of the planet's most important environmental issues (e.g., global climate change, ocean acidification, biodiversity loss, deforestation, pollution, declining freshwater resources, declining fisheries), which threaten the very resource base we depend upon for survival. Students from all majors will gain an understanding of the scientific method, as we delve into the most current scientific evidence behind these issues. Most importantly, through class discussions and assignments, students will be pushed to critically evaluate and determine what these issues mean for us as individuals, and a society, and how we can find collaborative solutions to humankind's most pressing problems.

This course is based on the knowledge that the causes, and thus solutions, to environmental problems are (will be) interdisciplinary in nature. While an understanding of the science is essential to comprehending the causes and extent of environmental problems, the solutions to these problems will require collaboration by people from all fields (e.g., scientists, politicians, economists, educators, local citizens, writers, journalists, entrepreneurs, engineers, farmers, artists, advertisers). Because this class will include students from a variety of disciplines, we will have the opportunity to explore how interdisciplinary solutions can be forged.

To effectively teach the interdisciplinary nature of course themes, curriculum will be taught through diverse materials that link the social, economic, and political aspects of environmental issues to their scientific and ecological bases. Because people learn in different ways and through different senses, materials will include a variety of science-based media that include a textbook, scientific publications, documentary films, video clips, books, and governmental reports. The material will cover the most serious environmental issues, as well as the key concepts that underlie all course themes: 1) that environmental issues stem from and will eventually affect most aspects of our society, 2) environmental issues are interrelated and synergistic in their effects, and 3) environmental issues affect all of us. In order to be relevant to students from all majors, class curriculum is intended to broadly cover course concepts, while allowing for more detailed discussion of the topics that specifically interest the student group.

In addition to multi-media learning and discussions, students will engage in class teaching, as well as class projects in which they will "learn through doing." Working in interdisciplinary groups, on "real world" research projects, students will identify and research real environmental problems and then forge and help implement science-based collaborative solutions to those problems. Through the discussion, analysis, and solving of real environmental problems with other people, students will gain the "real world" lessons of critical thinking and collaborative

solving problem. Students will have the unique opportunity to apply knowledge learned at the university to problem solving in the real world, while they are still in the academic setting.

A short explanation of what will be covered each week

Week 1	Themes	Class overview; what is environment?; ecological concepts (e.g., key terms, ecosystem services, ecological cycles)
	Activities	Introduction of group project ideas; students meet individually with instructor to discuss group projects and independent themes.
Week 2	Themes	What is science?; the scientific method; how to conduct research; the precautionary principle
	Activities	Choose group projects and independent themes to present; groups meet separately with instructor to discuss projects; contact project collaborators to schedule meetings.
Week 3	Themes Activities	Human population; consumption and exploitation; urbanization Student presentations; groups meet separately to discuss projects; groups meet with project collaborators.
Week 4	Themes Activities	Ecological economics; Tragedy of the Commons; politics Midterm Exam; student presentations; groups meet separately with instructor to discuss projects.
Week 5	Themes Activities	Biodiversity loss; habitat loss (land, freshwater, marine) Student presentations; groups meet separately to discuss projects
Week 6	Themes Activities	Freshwater resources Student presentations; groups meet separately with instructor to discuss projects; if necessary, groups meet with project collaborators.
Week 7	Themes Activities	Agricultural issues Student presentations; groups meet separately to discuss projects.
Week 8	Themes Activities	Marine resources; overfishing; aquaculture Student presentations; groups meet separately with instructor to discuss projects.
Week 9	Themes	Climate change; ocean acidification; energy resources; pollution (air, land, water)
÷	Activities	Student presentations; groups meet separately to discuss projects; final group meetings with project collaborators.
Week 10	Themes Activities	Environmental ethics; course conclusions Presentation of group projects to class and project collaborators.
		

c. A list of proposed texts

Each week, in order to be prepared for the discussion themes, students will be required to read and/or view required media that will include a selection of books, scientific articles, popular science articles, full length documentary films, and shorter video clips.

Textbook (online free-source)

Only relevant sections will be assigned for reading.

• Paul R. Ehrlich & Navjot S. Sodhi. 2010. Conservation Biology for All. Oxford University Press.

Scientific Articles

This list will be updated before the course to include publications of the most current findings. Students will be required to read two to four articles per week. Examples of articles:

- Faeth, S. H.; C. Bang; and S. Saari. 2011. Urban biodiversity: patterns and mechanisms. *Annals of the New York Academy of Sciences*, 1223: 69-81.
- EPICA community members. 2004. Eight glacial cycles from an Antarctic ice core. *Nature*, 429: 623-628.
- Berger, A. & M. F. Loutre. 2002. An exceptionally long interglacial ahead? Science, 297: 1287-1288.
- Reijnders, L. & S. Soret. 2003. Quantification of the environmental impact of different dietary protein choices. *American Journal of Clinical Nutrition*, 78 (3): 664S-668S.
- D. Tilman. 2001. Global environmental impacts of agricultural expansion: The need for sustainable and efficient practices. *Proceedings of the National Academy of Sciences of the United States of America*, 96 (11): 5995-6000.

Books

Students will be required to read two of the following books:

- The Population Explosion Paul and Anne Ehrlich
- *The Future of Life* E. O. Wilson
- Collapse: How Societies Choose to Fail or Succeed Jared Diamond
- The World is Blue: How our fate and the ocean's are one Sylvia Earle
- Our Stolen Future Theo Colborn, Dianne Dumanoski, and John Peterson Myers

Films

- *The Story of Stuff* (short)
- TED Talks: Sylvia Earle, Captain Charles Moore, E.O. Wilson
- Flow: For the Love of Water
- Food, Inc.
- The Future of Food
- End of the Line
- Homo Toxicus
- Frontline: Poisoned Waters
- A Crude Awakening
- Tapped
- Chasing Ice
- An Inconvenient Truth

d. Specific explanations of how students will earn a grade (number of papers, exams, etc.); please indicate precisely the number, length, and kind of assignments, and the percentage weight given to each

Group Research Project	25%
Independent Presentation	15%
Weekly Theme Reviews	10%
Midterm Exam	20%
Final Exam	20%
Class Participation	10%
TOTAL	100%

Grades will be based on a percentage of total points, as follows:

93-100% = A	80-82% = B-	68-69% = D+
90-92% = A-	78-79% = C+	63-67% = D
88-89% = B+	73-77% = C	60-62% = D-
83-87% = B	70-72% = C-	<60% = F

Course Assignments

Assignments for this class will promote integrative learning that prepares students for work in the real world. Class activities that involve real world projects, student participation in teaching, and course content evaluation will promote critical thinking, self-evaluation, problem solving, discussion, and debate in student learning.

Group Research Projects

The group research project will give students the opportunity to apply what they learn in this course to the real world. This project is modeled off a course offered through the Odum School of Ecology, at the University of Georgia, titled the "Environmental Practicum." It has been a hugely successful course in which students work to find solutions to real world environmental problems, by acting as consultants to local "clients." Not only do students learn much more through "doing real work" than they ever could by studying only theory, but their academic efforts are put to good use in the larger community. This kind of "real world" learning is also being applied at UCLA's Institute of the Environment (IoE), in which senior undergraduate Environmental Science majors enroll in a year-long Environmental Practicum course (three courses in total) in which they work on environmental problems for participating local clients.

The benefit of assigning such a project in an Honors Collegium course is that it provides the unique opportunity for exemplary students from different majors to collaborate on *interdisciplinary* solutions to environmental problems (in comparison to environmental major students working together in groups). This fulfills a key goal of the course: for students from all majors to learn how to collaborate on solving current environmental problems. Students will thus be presented with "real-world" environmental problems that will require interdisciplinary problem solving (as opposed to research questions that require only scientific or "environmental" training). Students will be given the option to choose from projects that have been vetted by the course instructor, or to work on approved projects of their own choice.

According to interest, students will divide into groups of three to four, and then work to address the problems/questions put forth by the participating group they choose (e.g., nonprofit organizations, communities, "green" businesses). Examples of potential questions that students might be presented with are outlined below. Consultation with organizations prior to the course (by the instructor) will result in more defined projects that students will be able to complete within the eight week timeframe.

- 1. <u>Problem</u>: Unsustainable residential landscapes waste water and energy, pollute, and provide few ecosystem services.
 - Question: "What are the quantifiable environmental and economic benefits of converting traditional landscapes to "ocean friendly gardens," and how do we use that information to convince more people join the program?"
 - Project/Organization: Ocean Friendly Gardens, Surfrider Foundation
- 2. <u>Problem</u>: The overuse of disposable plastics is polluting the ocean and the fish we eat. <u>Question</u>: "How many people know about the problem of plastic pollution, and how do we more effectively reach and educate a larger population?" <u>Organization</u>: Five Gyres
- 3. Problem: Farmers markets around Los Angeles want to become more sustainable, but they don't know how (e.g., they generate plastic trash, don't do much to promote organics, create more local auto traffic, and are too expensive to reach larger populations).
 Question: "What can we do to "green" LA farmers' markets (specifically Westwood and West LA) and make them more sustainable?
 Business: Destination Green Events
- 4. Problem: A new biocommerce product that helps conserve Amazon rain forest, Bolivian sustainable wild harvested acai, is little known and difficult to sell on the international market.
 - Question: "How do we create a brand for our sustainable product, and how can we change our marketing strategy to sell more product?"
 - <u>Project/Community</u>: Organic Wild Harvested Acai Project, Indigenous Community of Porvenir, Bolivia
- 5. <u>Problem</u>: Traditional environmental education curriculum often fails to teach the real kind of environmental literacy that will promote societal change.
 - <u>Question</u>: "Which media, as supplementary environmental education curriculum, would be most effective at reaching students in the classroom?"
 - <u>Project/Organization</u>: Environmental Education Forum, SELVA International & UCLA's EEB Dept.

Student research projects will include literature and background research, ongoing consultation with stakeholders, possible visitation of field sites, consultation with experts, creation of implementation plans and/or materials, and (potentially) initial implementation of the plans. Project conclusion will include final meetings with organization collaborators to present results; presentation of project results to the class; and submission of final reports (minimum 10 pages) that outline the background research, problem addressed, methodology for problem treatment, solutions reached, and implementation strategy for the outlined solution. Additional materials produced for the projects (e.g., logos, photos, pamphlets, media) can supplement this report.

Independent Presentations

Students will also be required to work on one independent project during the quarter. This project will be based on one environmental theme (e.g., climate change, overfishing, biodiversity loss) of the student's choice. Students will be required to research their theme and then present, during class, current understanding of the theme, based on the scientific evidence. Students will have about 30 minutes for their presentations. They will present their research to the class and lead class discussion on the subject. Powerpoints of presentations will be submitted to the instructor. In addition to being evaluated by the instructor, the effectiveness and quality of the presentations will be evaluated by all other students present.

Weekly Theme Reviews

In order to prepare themselves for class discussions, students will be required to read/view listed media before the first session each week. Students will be required to submit weekly reviews summarizing their understanding of that week's theme. These reviews, to be submitted at the beginning of each week, will help students assess their understanding and opinions of the week's required readings/viewings, in order to be better prepared for class discussions. These reviews will be short (one page or less), and they should information such as: 1) their understanding of the theme, 2) the science behind the environmental problem, 3) how the theme is relevant to the student personally and to society, 4) critical review of the required media (e.g., are the assertions supported by science?, is the presentation biased?, is the media effective, entertaining, educational?),5) personal opinions related to the importance of the theme, and 6) ideas for solutions. This assignment will push students to think critically, understand the issues, differentiate science from bias, and personally assess and/or incorporate knowledge learned.

e. Indication of disciplines/majors to which the course might be considered particularly relevant.

Because the goal of this course is to teach students the interdisciplinary nature of environmental issues, the course will not only be relevant to students of all majors, but it will benefit from having a mix of students from a variety of backgrounds and fields.

f. Proposed number of units

5 units

g. Proposed enrollment

Seminar of 15-20

h. Preferred quarter that the course be offered

Flexible

i. Proposed class meeting schedule

Preferably T/Th seminar meeting twice a week, two hours per session; course could be scheduled any time after 9am.

j. Indication of whether or not the course will require TA support

TA support will not be required.

k. Suggestion of whether the course should be upper or lower division

I could be flexible as to what students this course is offered to: either all lower division, all upper division, or a mix of both.

l. A one page Curriculum Vitae

See attached.

EDUCATION

Ph.D., May 2008. Odum School of Ecology, University of Georgia, Ecology B.A., June 1996. University of California Los Angeles, Geography Department, Geography/Env'l Studies

ACADEMIC TEACHING EXPERIENCE

- Lecturer Department of Ecology and Evolutionary Biology, UCLA (2012 to present)
 Developed and taught EEB 18- Why Ecology Matters: the science behind environmental issues.
- Director Amazon Exchange Program (2009 to present)
 A university study abroad program (in development) in Noel Kempff Mercado National Park, Bolivia, in collaboration with the Five College Consortium, MA.
- Lead Teaching Assistant Odum School of Ecology, University of Georgia (2006 to 2007)
 Developed and taught ECOL 1000 Lab- The Ecological Basis for Environmental Issues.
- Undergraduate Student Advisor UCLA Palos Verdes Blue Butterfly (PVB) Project, DFSP San Pedro, CA (1997 to 2002)

PROFESSIONAL EXPERIENCE

- Founder/President SELVA International, Los Angeles, CA (2008 to present)
- Ecologist Resource Conservation District of the Santa Monica Mountains, CA (2009 to 2011)
- Project Director Community-based Podocnemis Turtle Conservation Project, Bolivia (2003 to present)
- Project Manager Palos Verdes Blue Butterfly (PVB) Project, DFSP, San Pedro, CA (1997 to 2002)
- Partner Tarweed Native Plants, Chatsworth, CA (2000 to 2002)
- Site Manager Inti Wara Yassi Wildlife Refuge, Parque Machía, Bolivia (1999 to 2000)
- Land Stewardship Director Palos Verdes Peninsula Land Conservancy, CA (1998 to 1999)
- Wildlife Biotechnician Northern Spotted Owl Project, Mount Rainier National Park, WA (1997)
- Researcher UCLA / UC Irvine collaborative project, CA (1994)

SELECTED PUBLICATIONS

- Lipman, A., Conway-Gómez, K., and L. Saucedo Mendía (in press). Locally-based conservation of Amazon river turtles in Noel Kempff Mercado National Park, Bolivia. The Journal of the IUCN Commission on Environmental, Economic & Social Policy (CEESP).
- Mattoni, R., T. Longcore, Z. Krenova, and A. Lipman. 2003. Mass rearing the endangered Palos Verdes Blue Butterfly (*Glaucopsyche hygdamus palosverdesensis*). Journal of Research on the Lepidoptera 37:55-67.
- Lipman, A., T. Longcore, R. Mattoni, and Y. Zhang. 1999. Habitat Evaluation and Reintroduction Planning for the Endangered Palos Verdes Blue Butterfly. Final Technical Report to CDFG, 44 pp.

SELECTED GRANTS & CONTRACTS

- The Andrew W. Mellon Foundation (2012). \$60,000. Completed.
- Turtle Conservation Fund / IUCN (2005 & 2011). \$10,000. Awarded.
- Wildlife Without Borders-Latin America and the Caribbean Conservation (2006). \$25,000. Completed.

Alison Lipman

- The Charles A. and Anne Morrow Lindbergh Foundation (2005). \$10,850. Completed.
- Fulbright Grant (2004 to 2005).
- Los Angeles County Regional Park & Open Space District (1999 to 2002). \$230,000. Completed.

SELECTED PROFESSIONAL SERVICE

- IUCN Redlisting Group for South American Freshwater Turtles and Tortoises (2010 to present)
- IUCN Species Survival Commission / Tortoise and Freshwater Turtle Specialist Group (2005 to present)
- Science Chair, Ballona Creek Watershed Task Force (2008 to 2010)
- Malibu Creek Technical Advisory Committee (2008 to 2010)

New Course Proposal

	Honors Collegium 41 Understanding Ecology: Finding In Problems	terdisciplinary Solutions to Environmental	
Course Number	Honors Collegium 41		
<u>Title</u>	Understanding Ecology: Finding Interpretation	terdisciplinary Solutions to Environmental	
Short Title	ECOL & ENVIR		
<u>Units</u>	Fixed: 5		
<u>Grading Basis</u>	Letter grade or Passed/Not Passed	I	
Instructional Format	Seminar - 4 hours per week		
TIE Code	SEMT - Seminar (Topical) [T]		
GE Requirement	Yes		
<u>Major or Minor</u> <u>Requirement</u>	No		
<u>Requisites</u>	This course is designed for student	ts enrolled in the College Honors Program	
Course Description	This course explores the ecological basis of the planet's most important environmental issues, including global climate change, ocean acidification, biodiversity loss, deforestation, pollution, and declining freshwater resources and fisheries. The class looks at both the hard science and the interdisciplinary solutions (social, political, educational) to environmental problems.		
<u>Justification</u>	This is a course designed to be offered in the interdisciplinary series called the Honors Collegium. It is suitable for all majors. With some discussion about balance in the content, it has been approved unanimously by members of the Faculty Advisory Committee for Honors, whose members come from varied disciplines, and by it Chair. The course will be submitted to the GE committee.		
<u>Syllabus</u>	File <u>013AlisonLipmancoursepropos</u> file by clicking on the file name.	sal.doc was previously uploaded. You may view the	
Supplemental Information			
Grading Structure	Group research project on "real-life" probem (e.g. unsustainable landscape waste water): 25% Individual presentation: 15% One-page weekly theme Reviews: 10% Written Midterm Exam: 20% Written Final Exam: 20% Class Participation: 10%		
Effective Date	Fall 2013		
<u>Instructor</u>	Name	Title	
		Lecturer	
Quarters Taught	Fall Winter Sprin	ng Summer	

<u>Department</u>	Honors Collegium	
<u>Contact</u>	Name	E-mail
Routing Help	G JENNIFER WILSON	gjwilson@college.ucla.edu

ROLLTING STATUS

ROUTING STATUS			
Role:	Dean College/School or Designee - Friedmann, Manuela (mfriedmann@college.ucla.edu) - 58510		
Status:	Pending Action		
Role:	FEC Chair or Designee - Castillo, Myrna Dee Figurac (mcastillo@college.ucla.edu) - 45040		
Status:	Returned for Additional Info on 4/23/2013 4:36:41 PM		
Changes:	No Changes Made		
Comments:	Routing to Manuela Friedmann for Dean Turner's approval.		
Role:	Department Chair or Designee - Gurval, Robert A (gurval@humnet.ucla.edu) - 56744		
Status:	Approved on 4/20/2013 4:30:04 PM		
Changes:	No Changes Made		
Comments:	No Comments		
Role:	Initiator/Submitter - Wilson, G Jennifer (gjwilson@college.ucla.edu) - 51752		
Status:	Submitted on 4/19/2013 10:03:40 AM		
Comments:	Initiated a New Course Proposal		



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Comments or questions? Contact the Registrar's Office at cims@registrar.ucla.edu or (310) 206-7045