



Final Report

***Action Research Team
Sustainability Curriculum***

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Executive Summary

UCLA is known for its impressive academic record and for its highly qualified professors and researchers. Over 25,000 undergraduate students have access to an incredible amount of resources, tools, and information to help further their education. UCLA's Institute of the Environment is a vital part of the learning community and is the headquarters for environmentalism and sustainability on campus. However, sustainability is a multidisciplinary academic field that is related to everything from Economics to English. The purpose of our Action Research Team's project was to gage both student and faculty interest in further incorporating sustainability into their academic experience at UCLA. This idea of "greening the curriculum" was executed in a process that involved both surveys and campus outreach.

The project had three main aspects: a faculty survey, a student survey, and establishing a faculty curriculum workshop. It was our goal to bring faculty together in a forum to collaborate and discuss ways to incorporate sustainability into their various disciplines. After researching numerous other universities with similar characteristics and their approaches to sustainability in the classroom, it was clear that a faculty workshop was the best way to achieve this collaboration.

In order to receive funding for such a workshop, it is necessary to prove that there is a willingness to 'supply' these classes at UCLA. Our faculty survey provided the necessary data to show that there is in fact faculty demand for such a workshop. Beyond the information about a faculty workshop, researching various universities contained other useful information. Several universities that hosted their own faculty sustainability workshops also created their own resource bank. In most cases, this pooling of information was the result of collaborative efforts from faculty in various departments. The resource banks consisted of sample syllabi, relevant facts about sustainability, articles, videos, and lecture ideas.

Both the faculty workshop and subsequent resource bank are ideas that will come to fruition partially because of the results of the faculty survey. Our team had the opportunity to attend meetings of the Academic Subcommittee of the Sustainability Committee at the Institute of the Environment. These meetings proved to be incredibly helpful in guiding our project and obtaining insight into the perspectives of faculty members.

The final element to our project is the student survey – i.e. the 'demand' side. The questions in the survey worked in conjunction with the faculty survey to gage student interest in seeing sustainability incorporated into more of their coursework. Additionally, the survey provided a forum to asks students which faculty members they had who were already weaving sustainability into their classes. Students provided a long list of faculty who could now potentially benefit from a faculty workshop or perhaps utilize the resource bank that will be created in the future.

Overview/Objectives/Project Goals

We worked on this project primarily to encourage the inclusion of sustainability across a multitude of disciplines at UCLA; in other words, a method UCLA can use to "green the curriculum". There is currently a need to account for existing classes that already include sustainability in their curriculum and to provide faculty with the information and resources necessary to include sustainability in current courses offered. Our team progressed these needs by developing a faculty survey, a student survey, and recommendations for a resource bank of educational materials.

The faculty survey was intended for information gathering regarding sustainability across the curriculum, and also gauges interest in participating in a sustainability workshop. The student survey was aimed at graduate and undergraduate students. The student survey asked about classes taken that relate to sustainability along with a request for student input regarding which classes they would like to see include sustainability in curriculum. Finally, the resource bank is a template that the faculty will use as a tool for uploading sample lectures, modules, and slides relating to sustainability in particular disciplines. The resource bank will most likely be established at the faculty workshop and will serve as a database of relevant lectures and revised syllabi; essentially the goal is to help faculty view their discipline through the lens of sustainability.

Background and Initial Conditions

Our project rose out of the Institute of the Environment's need to properly gauge faculty interest in the realm of teaching and incorporating sustainability within curriculum at UCLA, and at the same time, understand undergraduate and graduate perspectives and knowledge on sustainability within courses at UCLA. Our team aimed to launch the faculty survey to allow the Institute of the Environment to apply for a grant from the Office of Instructional Development. The grant would be utilized to put on a curriculum development workshop for faculty at UCLA. In addition, the Institute of the Environment wanted to be able to understand student's interest in the topic of sustainability through the work of our Action Research Team.

Before our Action Research Team arrived, there was no concrete information or understanding on how faculty and students on campus felt about including sustainability and environmentally related material within classes at UCLA. Our project was to figure out how and at what levels faculty and students were interested at the prospect of including sustainability in more academic disciplines at UCLA.

Research Methodology

For the Sustainability Survey / Campus Outreach Project, we essentially had three tasks to complete. After discussions with our stakeholder, Cully Nordby, and members of the Institute of the Environment's Academic Subcommittee, we first began compiling teaching resources from other universities. This helped establish the idea for a faculty sustainability workshop and a resource bank. The resource bank will most likely be established at the faculty workshop, where professors will come together and share ideas on how to incorporate sustainability into their existing coursework. This will be a resource for professors to incorporate sustainability within their curricula and lesson plans. In order to establish an idea for the faculty to build their own resource bank, we have been in contact with sustainability coordinators at other universities to understand what measures they have taken in implementing sustainability education within their respective universities' classes. We are also finding out how other schools involved professors and faculty within this transition (summaries of relevant information from schools with whom we've established conversations with are below, and links to popular resource banks is in the References section).

Our second goal was to administer a survey to faculty to understand their interest in taking the aforementioned workshop on how to incorporate sustainability into their course curriculum. The survey received 100 total responses, which is a very decent starting point. With the help of this data, the Sustainability Committee received a grant from the Office of Instructional Development, and the grant will be used to help fund the upcoming Faculty Curriculum Workshop.

We also administered a survey to undergraduate and graduate students to see their interest in taking courses with sustainability integrated into the curriculum and see which classes could include sustainability-related education by early spring quarter. This survey was sent out Environmental Studies, ESLP, and various other students. Online mediums, such as Facebook and List Servs, proved to be a useful tool to increase student participation and awareness of the survey.

Data Analysis

Below is a summary of what other universities across the nation are doing in regards to sustainability within classes. We chose to highlight these universities as they have a well-established reputation in the realm of sustainability within curriculum. Our findings range from large-scale workshops being implemented at schools such as Emory University to even separate schools of sustainability being established, i.e. such as Arizona State University.

Arizona State University

Arizona State University is the first school in the nation to establish a separate School of Sustainability. After discussing with sustainability coordinator Susan Ledlow, she stated that schools usually could take two options when deciding how to incorporate sustainability within classrooms. The first and more ambitious route is to create a

completely separate school for sustainability - i.e. ASU - and develop curricula with sustainability and the environment as focal points. Second, and a somewhat less drastic route, is to infuse and incorporate sustainability and environmental education within existing courses curricula and syllabi. This varies by each school's decision process, and the two routes are separate with the latter option doesn't necessarily allow for a complete focus on sustainability and environment, but rather including sustainability education where relevant in a wider variety of courses. The upside is that this method can be much more interdisciplinary and span more concentration areas.

Though UCLA isn't necessarily pursuing a separate school of sustainability, UCLA can benefit from learning what Arizona State has gone through in the past. Because Arizona State created this new school, this means entire courses were designed with sustainability in mind across many disciplines, and can be a great starting point for UCLA to understand the process in creating syllabi and course work for sustainability-related classes.

Emory University*

As an extension of Northern Arizona University's Ponderosa Project, Emory University's Piedmont Project helps to increase the resources for staff regarding sustainability related and focused classes. Each summer, a batch of 20 faculty members, who are usually interested in sustainability, gather for a 2-3 day workshop on Emory's campus. Faculty comes from a variety of departments on campus – not just "science based" departments. The different departments have the chance to gain insight from each other at the workshops so that they can create and revise courses to run smoothly, while still infusing environmental consciousness.

This workshop is intended to help professors create new courses that relate or focus on sustainability, or they can revise a syllabus of an existing course to incorporate more material regarding sustainability. Faculty are encouraged to revise or initiate at least one course, but most of the participants in the workshop end up revising or creating more than one course. There are many ways in which the professors at Emory revise existing courses, and some of those include, adding new readings, adding new labs, assigning new homework, integrating new research projects, developing new units or modules, or reorienting the course with a new paradigm. All of these aspects of the courses can be altered to contain more material related to sustainability.

Creating a resource bank logically followed from this process. Information like sample syllabi, course listings, and modules are made public on their website as well as detailed summaries from the professors themselves that discuss how these courses came about and what made them think that reorienting these courses would be beneficial. Professors then post these documents on their website where it is neatly organized by course and department. After the workshop had taken effect, Emory conducted a survey that concluded that about 79% of professors had revised at least 1 course to incorporate more sustainability; thus the outcomes of the program seem to be very positive.

Harvard University

Although Harvard has an "Office of Sustainability," their main resource is the "Sustainability at Harvard" website. This website is actually just a conglomeration of the different projects and services offered all across campus. In terms of curriculum, Harvard has a useful website with an updated list of classes that relate to sustainability (<http://environment.harvard.edu/student-resources/course-guide/courses/search>). This website has a search function which allows for a student to type in any subject area he or she might be interested in and view a myriad of courses that include sustainability and their topic of interest. Additionally, Harvard also has a "schools + units" section which contains links to each of the different colleges followed by information regarding what each of these colleges is doing in relation to sustainability. This information includes programs, classes, news updates and upcoming activities.

Massachusetts Institute of Technology*

Massachusetts Institute of Technology (MIT) is a leader in environmental research and also a leader in sustainability education in classes. Steven Lanou, MIT's Director for the Department of Environment Health and Safety, directed us to the resources MIT currently has readily available on the internet. MIT has developed an innovative and uniquely designed website that allows students and faculty to navigate what sustainability-related courses can be taken. The website allows for the user to sort classes based on the interested department, content area (i.e. solar, soil, water, energy, etc.), or by disciplinary area. This user-friendly site gives students easy access and understanding to what classes at MIT incorporate sustainability education on one website. The website has direct links from the different courses to MIT's Course Registrar, which simplifies the process for students to then enroll in these classes (<http://enviroclasses.mit.edu/browse.php>). If UCLA can, in the future, design a website that serves as a home base for sustainability and academic related information together, that would be a valuable asset to the student population.

San Diego State University*

The Center for Regional Sustainability at San Diego State University is the school's center of sustainable outreach, research, and academic involvement. Their goals are to collaborate with students, professors, and outside environmental groups and people to help find and execute sustainable solutions to help the area. Geoffrey Chase, the Director and Dean of Undergraduate Studies is involved in creating the Ponderosa Project. He also leads the lectures Leadership for Curriculum Change, wherever he is requested. The lecture is given to faculty that helps them lead their own workshops on their respective campuses in order to help better the curriculum with including sustainability or environmental concerns. Geoffrey Chase is a valuable person to keep in touch with. He has offered to help in any way that he can and is a very knowledgeable person regarding sustainability and education.

*University of Maryland**

The University of Maryland has joined schools such as Emory and Northern Arizona University in creating a community of learning for Faculty to "Green the Curriculum." Just as the Ponderosa and Piedmont programs were both named after nature areas surrounding their respective schools, U of Maryland's Chesapeake Project honors the Chesapeake Bay, which is an important part of the University of Maryland environment. The Chesapeake project is the faculty workshop held for University of Maryland professors to learn about incorporating sustainability into their curriculum. This project is funded directly by grants from colleges within campus, which gives these colleges a vested interest in the success of the program. Additionally, but providing funds for the Ponderosa Project, the different colleges feel ownership over the project and are therefore more inclined to participate and implement the ideas and new perspectives from the workshop. In addition to a faculty workshop, the Chesapeake project provides a resource bank of useful information for both students and faculty.

(http://www.sustainability.umd.edu/content/curriculum/chesapeake_project_resources.php.) The University of Maryland Campus Sustainability website also has an entire page of "environmental courses" which includes 33 courses that were revised as a result of this faculty workshop.

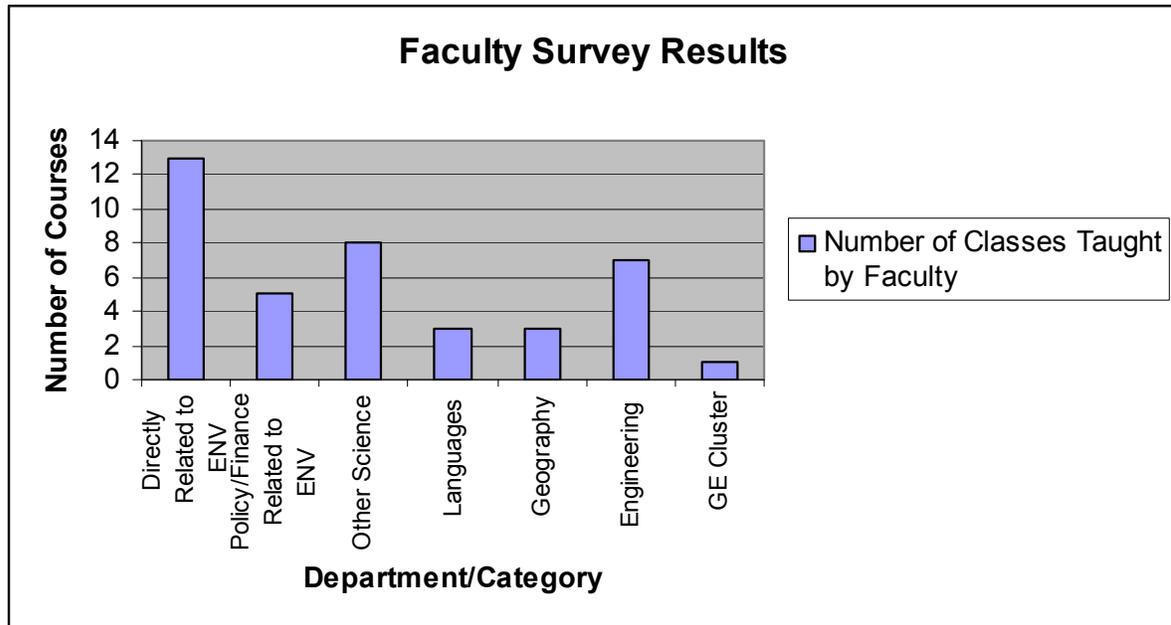
University of California, Berkeley

UC Berkeley Sustainability is the university's department that sets goals on how to approach sustainability on campus, such as through conservation of natural resources, reducing greenhouse emissions and using environmentally friendly cleaning products to help reduce negative impacts. It also is the center for student outreach and student-lead courses regarding sustainability. Their web site shows the different collaborations and how goals have been set or are currently being reached. Syllabi are not accessible to the public, but only to students there. However, they do provide a site with a list of the course descriptions that are relevant to sustainability and the environment.

UCLA may be able to find more efficient ways to implement projects, or may find new ones to go after in comparison to the Berkeley website. Also, the course descriptions could potentially help give some ideas as to how to expand curriculum including sustainability or the environment.

Faculty Sustainability Survey Analysis

The Faculty Survey consisted of a quick questionnaire regarding knowledge of sustainability, and also asked what their interest level is in incorporating sustainability into their curriculum. One hundred faculty members responded to the survey, with 45% of the respondents saying that they already incorporated sustainability into their coursework. Courses offered in Earth and Space Sciences, Environmental Sciences, Atmospheric and Oceanic Sciences, Geography, and Environmental Health Sciences each had either 4 or 5 class listings that already said to have incorporated sustainability.



The faculty shows similar results compared to the students in that there is already a number of courses that faculty are teaching that can incorporate more sustainability into their curriculum. Faculty indicated that there is significant room to infuse sustainability into courses within the sciences and engineering classes, as well as for classes that are already directly related to the environment.

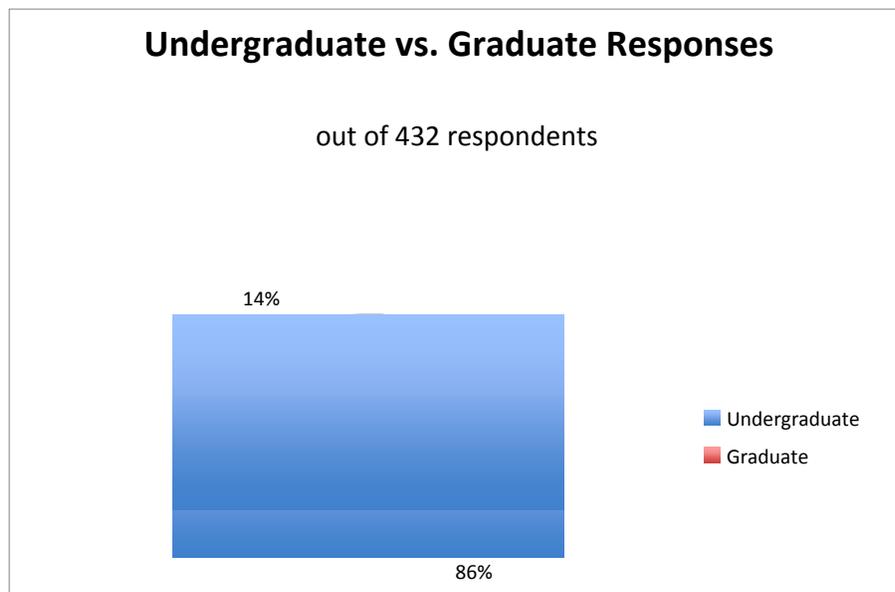
All together there was a list of 128 faculty members who were either recommended by students, or had enough interest to take the survey. This core group of faculty would be the most beneficial group of people to participate in a workshop. There was also a good mix of subject areas and departments that were represented in our interested participants. Some were from Graduate programs such as the Anderson School, or Medicine and even faculty from the Surgery Department. There were also a lot of undergraduate professors who were interested from areas such as Anthropology, Language and Geography. All of these different populations could benefit from Greening the Curriculum, but many probably do not know how to do so. The environment is a global cause, and it affects thing across the curriculum.

The information from the faculty survey could be used to get the small group of faculty to be the first participants of a sustainability workshop. This group of faculty is not only showing an interest, but they are also being recognized among their audience as successful contributors in their respective fields. They could serve as liaisons between their departments and the Institute of the Environment, bringing environmental news and updates to their department meetings, or department chairs. This could show the university that public (in particular, student) interest is high and that changing their department standards would be beneficial to their status on campus.

The faculty survey also included a comments section that provided useful information regarding faculty opinion. Their comments provided more insight into how well the survey was created, and suggestions of ways that it could have been improved. There were a total of 26 comments left by faculty. A majority of the comments dealt with the concern for not having “sustainability” defined within the survey. Other comments included how certain faculty members are including sustainability into the classroom or how it is irrelevant to the curriculum they teach. However, many of the comments also reflect great interest in incorporating sustainability into courses and would like help in doing so. This seems to reflect the need for some kind of workshop to help faculty come up with ways to include sustainability into their curriculum and also if another survey were conducted, defining the meaning of “sustainability” would be helpful.

Student Sustainability Survey Analysis

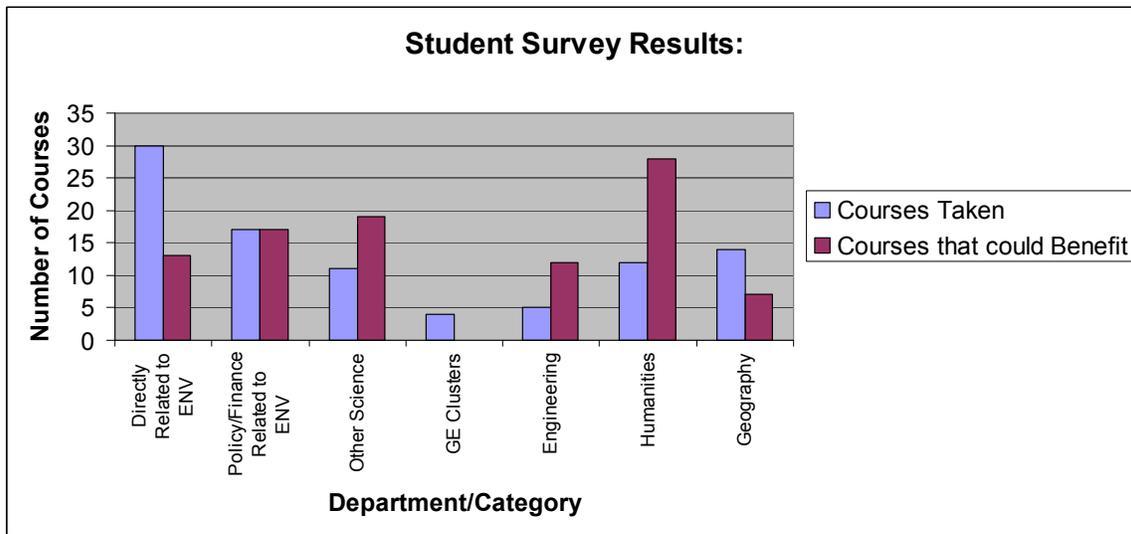
The student survey was administered to students in various majors and disciplines on campus. 435 people filled out our survey, and 432 responded to this question. Of the 432, 373, or 86%, were undergraduate students, and 59, or 14%, were graduate students. Though this response gives us a higher ratio of undergraduates to graduates than the roughly 2 to 1 ratio for the general population at UCLA, the result is not surprising due to the methods used to disseminate the survey – Facebook, undergraduate list serves, etc.



The survey asked the respondent what major they were enrolled in at UCLA. Out of 435 participants, 423 people responded to this question. The most respondents (117) were from majors that would fall under the category of social sciences. This was somewhat surprising because you would expect most students interested in sustainability to be studying fields directly related to sustainability, such as Environmental Science, Conservation Biology, or even different types of Engineering. The large number of social science responses could be due to the fact that social sciences includes some of the largest majors at UCLA, such as Political Science, History, Sociology, and International Development Studies to name a few. Regardless of the size of the sample population for social sciences, these results do at the very least show that there is interest in sustainability amongst students who are outside of the environmental majors. Life sciences were the next largest respondent with 71 respondents.

Life sciences include Molecular Cell Development Biology, Conservation Biology, Neuroscience and many others. Economics and business majors made up the next largest group of respondents, with a tally of 68. Environmental science was 4th with 57 respondents. Though they only finished 4th, this was a relatively high response rate as this was just one relatively small major. The high response rate clearly indicates an interest amongst environment majors, which was to be expected, but could also be due in part to the survey being sent out over the IoE list serv.

There was a relatively low response rate from physical science and engineering majors... This is somewhat distressing as they will be the ones who will be working on the green technologies in the future. Perhaps some sort of outreach campaign should be targeted at them, to get them interested in sustainability early on.



The student survey revealed not only that students have already taken a number of courses that incorporate a more sustainable curriculum, but also that there are many courses that the students would like to see incorporate more sustainability. The chart above is broken down into 7 categories, and each category is comprised of a few different departments that fit into that category. The categories are broken down as follows, and the same categories were used for both the student and faculty surveys.

Category	Departments within Category
Directly Related to ENV	Atmospheric and Oceanic Sciences, Environmental Sciences, Environmental Health Sciences
Policy/Finance Related to ENV	Public Policy, Urban Planning, Management, Economics
Other Science	Astronomy, Ecology and Evolutionary Biology, Earth and Space Science, Community Health Science
GE Clusters	GE Clusters
Humanities	Anthropology, Communications, English, Law, Sociology, Education, History, IDS, Political Science, Global Studies, World Arts and Cultures
Geography	Geography
Languages	Hindi
Engineering	Engineering, Civil and Environmental Engineering, Environmental Science and Engineering, Chemical Engineering, Mechanical and Aerospace Engineering, and Materials Science Engineering

One of the final questions “how interested are you in learning more about the following topics?” Students were asked to rate the following at low, medium, and high interest:

UCLA Student Sustainability Survey

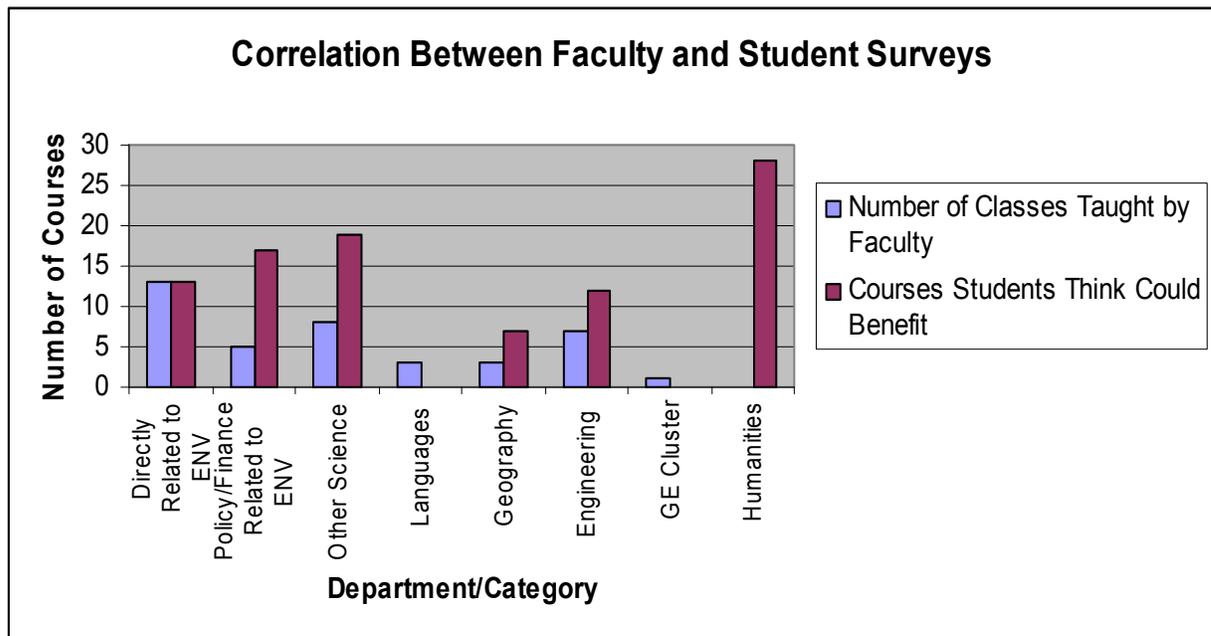
How interested are you in learning more about each of the following sustainability topics?				
Answer Options	Low	Medium	High	Response Count
Air and Climate	47	153	117	314
Biodiversity and Conservation	45	135	137	316
Natural Resource Management	36	121	162	314
Renewable Energy and Clean Technology	16	81	223	316
Sustainable Agriculture and Food	29	99	190	316
Waste Management and Recycling	42	125	148	313
City and Community Planning	60	114	146	316
Design and Green Buildings	44	105	169	316
Sustainable Living	29	80	209	316
Corporate Social Responsibility	45	129	144	315
Environmental Policy and Law	60	129	128	316
Environmental Economics	67	126	127	317
Public Health	33	129	152	313
Social Equity and Environmental Justice	58	126	132	313
<i>Answered question</i>				318
<i>Skipped question</i>				119

This question was finalized after several meetings with the IoE's Academic Subcommittee with the intention of giving faculty and staffs an idea of where student interests lie with respect to sustainability-based curriculum. The topics with the highest interest were found to be Renewable Energy and Clean Technology, Sustainable Living, Sustainable Agriculture and Food, Design and Green Buildings, and lastly Natural Resource Management. These five had votes of 162 and higher that were rated with "high interest," out of the 318 students who answered this question. This question reflects the

demand and interest to have courses available that are about or include the aforementioned topics in courses already available. Staff and faculty should be shown this information, which in turn may help convince them to provide courses in such areas or add such topics into current curriculum.

Correlation of Faculty and Student Surveys

While the student and faculty survey data gives insight into the preferences of each different group, a comparison of the two data sets together provides a unique perspective regarding sustainability in the curriculum.



As the graph above indicates, there is a correlation between which courses professors are willing to incorporate more sustainability into the curriculum and which classes' students want to see more sustainability infused into. This is exactly what we hoped to illustrate with the results of our survey, that there is supply and demand for a workshop that helps professors become more sustainable within their classes. Students and professors are both eager to see more environmentally friendly curriculum in the areas of policy and finance, science and engineering, and even management and economics, earth and space sciences, and other engineering courses.

In order to properly measure faculty interest, we asked specific questions on both the Faculty and Student surveys. On the Faculty survey we asked if each individual faculty participant could see a way to incorporate sustainability in his or her classes. On the Student survey we also asked the students if they had any professors that were already incorporating sustainability into their lectures, or faculty that might be interested. When we create some sort of faculty workshop, it will be beneficial to have professors who have a personal interest in greening the curriculum. Furthermore it will also be important to have faculty members that can successfully communicate green issues to a classroom.

By gauging what subjects and individuals could benefit from a green education we can narrow down the scope of which faculty should be targeted in our sustainability faculty workshop. In the faculty survey we requested that those who completed the survey write their name, department and contact information if they were interested in participating in a faculty workshop; 71% of participants expressed an interest in participating in a faculty workshop and a total of 70 faculty participants left their contact information so they could be contacted in the future to hear more information on a workshop. Of these 70 names of faculty, nine faculty names were also mentioned in the student survey.

There is correlation between the faculty that were interested enough to take the survey and the faculty that students were recommending. Some of this faculty was involved in the Environment department, so it made sense that they would be interested in 'green' education. Some however were in other departments including Management, Political Science and Linguistics and Language. The small group of nine faculty had both completed the survey, and been recommended by students. This group of people could possibly be willing to both participate, and even possibly lead parts of the sustainability workshop in mentioning how they actively incorporate sustainability into their curriculum.

Key Findings, Recommendations & Conclusion

Given the circumstances and the situation of sustainability in academia at UCLA before our team arrived, a lot has been accomplished in the past two quarters. Our project wasn't necessarily one that was hands-on or one that you could measure with tangible statistics on greenhouse gas reduction; our project was at the administrative level, aiming to gather information on faculty and student perspectives on sustainability within curriculum, and we gave the Institute of the Environment a solid basis of which to build off of.

With the results of the faculty survey, the obvious next step is to move forward with the faculty development workshop. In regards to the resource bank, our original goal for developing a comprehensive resource bank turned out to be more of a long-term goal. We were able to highlight the most successful sustainability campaigns at universities across the nation and identify salient points in how the Institute of the Environment can proceed with establishing a resource bank and database.

The student survey results are something that the Institute of the Environment can utilize as tangible proof of demand for sustainability within certain subject areas and from specific professors. Specifically, there were nine professors that both took the faculty survey and were mentioned in the student survey; as this report mentioned, these professors can be viewed upon as leaders and motivators for getting other faculty involved in sustainability within academics and the upcoming faculty curriculum workshop:

- Thomas Gillespie, Geography
- Richard Jackson, EHS
- Holger Brix, AOS
- Jonathan Lijieblad, Political Science

- Brian Walker, Political Science
- Gyanam Mahajan, Linguistics and Languages
- Kevin McKeegan, ESS
- Yongho Ju, MAE
- Lieba Faier, Geography

The most mentions by students were (these professors can also be a great resource as they are clearly experienced with including sustainability within curriculum here at UCLA):

- Thomas Gillespie, Geography: 8 times
- Justin Zackey, Geography: 9 times
- Matthew Kahn, Economics: 7 times
- Holger Brix, AOS: 4 times

The student survey also highlighted five subject areas with very high interest in incorporating sustainability within curriculum that should be noted for the faculty workshop and as evidence for future reference: *renewable energy/clean technology, sustainable living, sustainable agriculture and food, design and green buildings, and natural resource management*. There is clearly an interest in these subject areas specifically; what is now needed is a reciprocal response.

It should also be noted that 91 students wished to be added to the sustainability list as a result of the survey. In general, it seems that sustainability at UCLA is not a wide-known and popularized concept... However, through collaboration and outreach with other student groups or even a marketing campaign, sustainability at UCLA could definitely increase awareness, publicity, and campus involvement.

In closing for our Final Report, our team also came up with a list of specific classes that could benefit from including sustainability within these courses as a starting point for the Institute of the Environment when the Faculty Workshop comes around:

-*Architecture and Urban Design (M125B)*: Digital Cultural Mapping: Could focus more on green building design and LEED certification.

-*Art*: Drawing art related to nature and landscapes; incorporating environmentally friendly art products

-*Biology*: Specific health/respiratory effects of air pollution from particulate/pollution increases; could vary over different cities, regions, or countries.

-*Chemistry*: Effects of chemicals (i.e. pesticides/herbicides) on nature ecosystems.

-*Economics*: Understanding 'global externality' concept of pollution; correlation of supply chain emissions with revenues/profits; cap and trade systems and how it creates a new market.

-*Economics 142: Economics of Risk*: Aiming to understand risks of investing in clean technologies or renewable energies.

-*English*: Incorporate readings/poetry related to nature (i.e. Silent Spring, Coevolution of Insects and Plants, Population Bomb, etc.).

-*Geography 184: Economic Geography*: Showing how climate change may change agriculture yields as fertile lands move northward and how trade balances may change as countries begin to substitute demand for oil.

-*History*: Understand the degradation aspect of the environment as a result of the Industrial Revolution in America and Great Britain.

-*International Development Studies*: Show effects of green house gas emission caps on third world economies.

-*Music (Introductory)*: Include nature inspired songs and/or sounds.

-*Political Science 20: World Politics*: How climate change and global warming is playing a growing role in political relationships and summits of nations (i.e. COP 15, COP 16).

-*Political Science M115A: Ethics and Governance*: Should government implement a carbon tax out of morality for the environment we live in? Should government be more involved in regulating environmental degradation and pollution of firms/individuals?

-*Statistics 100A, 100B*: Dissecting correlations between environmentally-related issues, i.e. Environmental Kuznets Curve, relation between per capita income and greenhouse gas emissions.

-*Urban Planning C184: Looking at Los Angeles*: For example, understanding how to retrofit homes with energy efficient technologies or solar panels to reduce dependence on coal-powered electricity.

-*World Arts and Cultures*: Impact that sustainable and organic food has on global cultures.

References

ASU

<http://schoolofsustainability.asu.edu/faculty/index.php>

Emory University

<http://www.scienceandsociety.emory.edu/piedmont/curriculum.htm>

MIT:

<http://enviroclasses.mit.edu/browse.php>

Stanford University:

<http://ssu.stanford.edu/index.php>

Stanford Initiated Program: <http://pangea.stanford.edu/courses/i-earth/index.html>

UC Berkeley: <http://enviro.berkeley.edu>

University of Maryland:

http://www.sustainability.umd.edu/content/curriculum/chesapeake_project_schedule.php

The Ponderosa Project - Northern Arizona University

<http://www2.nau.edu/~ponder-p/>

The Piedmont Project - Emory University

<http://www.scienceandsociety.emory.edu/piedmont/>

The Chesapeake Project - University of Maryland

http://www.sustainability.umd.edu/content/curriculum/chesapeake_project.php

University of California, Santa Barbara

<http://sustainability.ucsb.edu/academics/resources.php>

University of Maryland

http://www.sustainability.umd.edu/content/curriculum/chesapeake_project_resources.php

Appendices

- A.) Copy of UCLA Faculty Sustainability Survey – Qualtrics
- B.) Copy of UCLA Student Sustainability Survey – SurveyMonkey

A.) UCLA Faculty Sustainability Survey Copy

- 1) How would you rank your knowledge of sustainability? (Scale 0-4)
- 2) Would you be interested in participating in a free Curriculum Development Workshop to help you include relevant sustainability content tailored to your courses?
- 3) Please indicate how helpful each of the following would be for you to incorporate more sustainability into your course(s)? (Matrix scale 0-4)
 - Resource bank of course materials (i.e. sample lectures, exercises, modules, etc.)
 - Curriculum development workshop or seminar
 - Monetary incentive for creation of new syllabus/module (\$500-\$1,000)
 - Other
- 4) Do you currently incorporate sustainability education at any level into any of your courses?
- 5) Which of your courses currently incorporate sustainability education?
- 6) Would you be willing to share sustainability-related course materials with other UC faculty?
- 7) Please fill in contact information below. We will only use this information to contact you about future opportunities related to incorporating sustainability content into courses you teach.

B.) UCLA Student Sustainability Survey Copy

I. Basic Information

- 1) Please indicate if you are a Graduate or Undergraduate Student
- 2) Please indicate your Major or area of Graduate Study

II. Sustainability at UCLA

"A sustainable society is one that is environmentally viable, economically robust, and socially just and equitable - one that meets the needs of the present without compromising resources for future generations."

Based on this explanation, please answer the following questions to the best of your ability:

- 3) How would you rank your understanding of sustainability?
- 4) At UCLA, what classes have you taken related to sustainability? If possible, please include department and course number. (If you've taken several, please list those that featured sustainability- related content the most.)
- 5) Please list any classes that you have taken that could benefit from incorporating sustainability into the existing course work.
- 6) Please list any professors you know who would be interested in incorporating sustainability into their curriculum.

III. Sustainability Concepts at UCLA

7) How interested are you in learning more about each of the following sustainability topics (Low, Medium, or High)?

- Air and Climate
- Biodiversity and Conservation
- Natural Resource Management
- Renewable Energy and Clean Technology
- Sustainable Agriculture and Food
- Waste Management and Recycling
- City and Community Planning
- Design and Green Buildings
- Sustainable Living
- Corporate Social Responsibility
- Environmental Policy and Law Environmental Economics
- Public Health
- Social Equity and Environmental Justice

8) If you would like to be added to UCLA's Sustainability listserv, please include your email below. You will be updated on events, job opportunities in sustainability, and information about sustainability-related courses.

Thank you for completing the UCLA Student Sustainability Survey! For more information about UCLA Sustainability, please visit: www.sustain.ucla.edu

The End