

Investigating the Role of Sustainability in the Curriculum: Final Report
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Executive Summary

As a Sustainability Fellow, I spent my senior year dedicated to a sustainability-themed research project of my choice. In my first three years at PLU, I had learned that the general understanding of sustainability amongst students is limited; most would say sustainability is simply energy conservation and recycling. To address this limitation, I used my fellowship to investigate how sustainability can be further integrated and institutionalized within our undergraduate curriculum. After my year of research, I believe creating a sustainability graduation requirement is the best way approach a curriculum change. While there are elements of sustainability already incorporated in PLU's academic sector, this concept should be taught across campus and explicitly integrated in our curriculum system, thus accessing and benefiting all students.

- Sustainability in the curriculum is in line with our University's mission and Lutheran identity, the President's Climate Commitment, the educational values of the General Education Program, and PLU's Integrative Learning Objectives.
- Our community has demonstrated its support: PLU 2020 calls for further development of sustainability into the curriculum and discusses its role in the General Education Program as it relates to diversity and justice.
- ASPLU passed a resolution in favor of increasing sustainability in their education; students value and support the institutionalization of a new GenEd.
- A cross-campus curricular change is logistically possible: 89.58% of undergraduate students already take at least one course that was reported to include elements of sustainability.

Given the environmental, social, and economic crisis we face today, engaging with the interconnected issues of sustainability is a moral responsibility of higher education and should be an integral part of our undergraduate learning. With the many commitments to sustainability our university has made, a graduation requirement seems the next step to establish PLU as a national leader of sustainability in higher education and prepare students to address the challenges of our world.

Introduction

As a 2011-2012 Sustainability Fellow, I have been working on a research project investigating where and how sustainability can be institutionalized in PLU's undergraduate curriculum. There are elements of sustainability already incorporated in PLU's academic sector, however it is not yet consistent and explicitly integrated in our curriculum system¹. Because of our world's present environmental, social, and economic challenges, critically engaging with sustainability should be an integral part of our undergraduate learning.

As a result of my findings, I propose a sustainability graduation requirement within the General Education Program, structured similarly to the current diversity requirements. In order for every student to engage with the multi-faceted discussion and analysis of sustainability, sustainability needs to be incorporated across campus, in as many departments and disciplines as possible. Because of the broad and holistic nature of sustainability, this is indeed feasible.

Within this report you will find evidence for why the institutionalization of sustainability in academics is in line with PLU's educational values and commitments. PLU 2020 calls for further development of sustainability into the curriculum, and discusses its role in the General Education Program. I will demonstrate that the integration and learning objectives of a sustainability GenEd are not only consistent with the General Education program, but that a new requirement is logistically possible within our current curriculum. Finally, I will show that this is an idea supported by PLU students, as demonstrated by the resolution that was approved by ASPLU in April 2012.

Definition of Sustainability

While there can be a number of different definitions of Sustainability, for the purposes of my project I define it this way: *Sustainability means care for people, the planet, and prosperity, both now and in the future. Teaching about sustainability requires critically analyzing and engaging the inseparable importance of environmental, economic, and ethical principles.* I drew

¹ PLU 2020 Sustainable Community Working Group Year End Report, p 4.

this definition from PLU 2020, and received approval for using it in this project from the Campus Sustainability Committee.



(Image: <http://johngerber.world.edu/2011/07/12/future-sustainable-food-farming/>)

A breakdown of terminology helps us look closer at the multiple dimensions and applications of sustainability to the curriculum.

People: A sustainable community must be characterized by equity, respect for diversity, and a full participation by all members. This requires the academic study of social justice, environmental policy, history, religion, business, art, and many other topics. Sustainability calls students to reflect on personal values within the context of a larger society and grasp how their choices can affect others.

Planet: Students learning about sustainability are called to reflect on how they impact the ecosystems of which they're a part and on how they conserve and value the natural world. Understanding the intimate relationships between social and ecological systems is vital to citizenship in the 21st century and a logical outgrowth of PLU's mission statement which includes care for the earth.

Prosperity: A commitment to sustainability implies that all things should thrive and that a community must be healthy and prosperous in order to care for people and the planet. Prosperity refers to the flourishing of an individual or community and can take on a variety of meanings, including economic success, personal fulfillment, social equality, and public health.

Working within this definition, there are many ways the study of sustainability can be manifested in the curriculum. Many departments already address sustainability in their learning objectives, research projects involve sustainability, and students find themes of sustainability in their courses and careers². But in order to fully embrace sustainability in the curriculum and communicate with students its relevance and importance, we need to develop a deliberate multidisciplinary approach, encouraging the diversity and contribution of each discipline. In this way, sustainability themes will be better integrated into the curriculum, student-faculty research, and all aspects of academic life.

Sustainability in PLU's Mission and our Lutheran Identity

Such a curriculum addition is in line with our University mission statement, as *PLU seeks to educate students for lives of thoughtful inquiry, service, leadership and care – for other people, for their communities, and for the earth*. Community, other persons, and the Earth implies a focus on people, planet, prosperity, therefore matches the goal of sustainability. Further, the campus master plan commits to “develop the campus as a model of and learning laboratory for sustainability.³” Curriculum is a key way to model and teach sustainability.

In addition to PLU's commitments, the Evangelical Lutheran Church of America (ELCA), the church with which PLU is affiliated, lists sustainability as a core principle and emphasizes that sustainability impacts multiple spheres of life, incorporating both concern for the global environment and for human communities, attending to both moral ideals and economic realities. It affirms the interconnection between people, planet, and prosperity, emphasizing a commitment to “the capacity of natural and social systems to survive and thrive together over the long term.⁴”

In spring 2007, President Loren Anderson joined the President's Climate Commitment Leadership Circle. The President's Climate Commitment calls upon colleges and

² PLU 2020 Sustainable Community Working Group Year End Report, p 3.

³ Campus Master Plan, p 20. (<http://www.plu.edu/large-forms/fiops/PLU-MIMP-draft-2010-06-29-optimized>)

⁴ ELCA, “Caring for Creation” Social Statement, 1993; and “Sufficient, Sustainable Livelihood for All” Social Statement, 1999 (<http://www.elca.org/What-We-Believe/Social-Issues/Social-Statements>).

universities to “exercise leadership in their communities and throughout society by modeling ways to eliminate global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality.⁵” Within two years of signing the document, there should be institutional action to “make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.⁶”

In developing ourselves as an environmentally responsible and sustainable institution, we have enacted programs to save resources with “Can the Can” and “unPLUG”, and the conservation of energy and water due to facility upgrades. On-campus projects such as Recyclemania, the Fred L. Tobiason habitat restoration site, the Community Garden, Green Fees, and student research fellowships are all geared towards campus sustainability.⁷ Considering the moral responsibility of our undergraduate learning, creating a requirement for all students seems the right thing to do. With the many commitments to sustainability our university has made, a graduation requirement seems the next step to establish PLU as a national leader of sustainability in higher education.

PLU 2020: Affirming Our Commitments, Shaping Our Future

Sustainability is used and emphasized within *PLU 2020: Affirming Our Commitments, Shaping Our Future*. PLU 2020 calls us to “make substantial innovations in the curriculum and in our co-curricular programs so that PLU students are better prepared to work toward a sustainable future for the rest of their lives.⁸” Consequently, there is a wide community interest in discussing sustainability as an aspect of the General Education Program, and exploring its inherent connection with diversity and justice.⁹

PLU 2020 reminds us that education in the 21st century must take serious the environmental and social challenges we face today, and in many ways we already have. However there is often mention of the work we must do to increase these efforts such as broaden our definition of

⁵ <http://www.presidentsclimatecommitment.org/>

⁶ <http://www.presidentsclimatecommitment.org/>

⁷ PLU 2020: Affirming Our Commitments, Shaping Our Future, p 54.

<http://issuu.com/pacific.lutheran.university/docs/plu-2020?mode=window&viewMode=doublePage>

⁸ PLU 2020: Affirming Our Commitments, Shaping Our Future, p 54.

⁹ PLU 2020: Affirming Our Commitments, Shaping Our Future, p 39.

sustainability and further develop our educational commitment to it.¹⁰ As the intersection of sustainability, diversity, and justice are renewed and broadened, the collaborative efforts of multiple departments and committees advance three of the five Integrative Learning Objectives - interaction with others, valuing and multiple frameworks.¹¹

PLU 2020 calls on us to articulate what it means to be a diverse, just and sustainable community and challenges us to integrate them more fully into our institutional culture and programs.¹² In order to do so, defining and learning about sustainability to its fullest extent is a fundamental building block to understanding its relevance and increasing its importance amongst campus culture. In my four years at PLU and throughout recent conversations regarding my fellowship, I've realized the general understanding of sustainability amongst students is limited; most would say sustainability is energy conservation and recycling. A commitment to teach every student about the complex issues of sustainability in the curriculum would expand preconceived notions and beneficially influence campus culture.

Proposed Alternatives

There are many ways that sustainability could be further worked into the undergraduate coursework to meet our mission and educational objectives. These include offering a sustainability major/ minor, or individual sustainability courses to be taken as an elective. All of these alternative methods include structural changes that would require a significant amount of additional funding and infrastructure. In contrast to an elective, a requirement ensures that every student will engage with sustainability in the classroom. This allows each student to apply the important principles of sustainability to their personal educational pursuits and vocation. The introduction of a GenEd also creates a campus-wide effort, cohesive and consistent, to act on our commitments to sustainability in academic life.

Another option is voluntary incorporation of sustainability by faculty into their existing coursework, without a requirement. In 2011 Kevin O'Brien, Brian Naasz, and Jill Whitman led a

¹⁰ PLU 2020: Affirming Our Commitments, Shaping Our Future, p 54.

¹¹ PLU 2020: Affirming Our Commitments, Shaping Our Future, p 55.

¹² PLU 2020: Affirming Our Commitments, Shaping Our Future, p 12.

summer workshop in which 17 faculty met to increase discussion about sustainability in the curriculum and develop both the capacity and comfort to incorporate sustainability themes with goals of their disciplinary teaching. Results of the workshop included development of sustainability-related projects in numerous courses, faculty-team teaching, and increased conversation among faculty about sustainability as an interdisciplinary concept – all successful forms of increased integration. This demonstrates an interest among some faculty and a proven capacity to train people who are interested in how to build sustainability into their coursework.

This method of integration, however, calls upon the dedicated interest of a handful of faculty, and relies on their personal pursuits of sustainability to be worked into their curriculum. This type of change is worthwhile, but only the students in these specific classes are feeling the effects. Sustainability is incorporated, but not yet meeting its full interdisciplinary potential. The implementation of a GenEd is the best way to access and benefit all students.

General Education Program and Integrative Learning Objectives

PLU's Integrative Learning Objectives include "the ability to critically analyze and resolve complex issues and problems to being able to work in and understand constantly changing environments, cultures, and times."¹³ In addition, the ILOs include a commitment to "develop a habit of caring for oneself, for others, and for the environment"¹⁴ and "approach one's commitments with a high level of personal responsibility and professional accountability."¹⁵ Teaching all students about sustainability would help to fulfill these learning objectives, as sustainability involves developing the relationship between people, the planet, and overall prosperity. Not only will students be better equipped to understand the complex issues of social equity, economic vitality, and environmental integrity, but they will also be challenged to think about their personal sustainability and lifestyle choices. [See appendix A for full document of PLU's ILOs].

¹³ Integrative Learning Objectives of Pacific Lutheran University, p 1.

¹⁴ PLU Course Catalog, p4.

¹⁵ PLU Course Catalog, p4.

Principles and values specific to the General Education Program are “grounded in an understanding of scientific perspectives, mathematics, languages, and the long-standing traditions of critical discourse about nature, humanity and the world.¹⁶” The undergraduate requirements encourage on-going conversations about nature and the human condition and “affirms the relationships among rigorous academic inquiry, human flourishing in a diverse world, and a healthy environment.¹⁷”

Just as the ‘encountering perspectives on diversity’ requirements are an integral component of the general education program and satisfy a number of these principles, a sustainability requirement would also influence student development towards these goals. Looking at different cultural perspectives within our own society and around the world plays a crucial part in sustainability as a global and local effort, especially within the context of environmental justice and social equity. Since sustainability is the combination of people, planet, and prosperity, this additional requirement would speak more directly to understanding how culture can use, conserve, and value the natural world. At PLU we often talk about the quest for diversity, justice, and sustainability, both in our commitments and community. A sustainability GenEd could complement the diversity requirements we already have in place.

This GenEd requirement would also require its own set of learning outcomes. I suggest these:

- Increase understanding of sustainability as the complex network of environmental, social, and economic relationships
- Increase conversation about what it means to care for people, the planet, and prosperity now and in the future.
- Nurture empathy, awareness, and respect from an intergenerational and global perspective.

¹⁶ PLU Course Catalog, p 8.

¹⁷ PLU Course Catalog, p 5.

In a “conversation of possibility” with the General Education Council, the Council agreed they would supportively entertain proposals from faculty about in the inclusion of sustainability in PLU’s General Education system.

A logistical study

With many educational objectives and graduation requirements already in place, the idea of a new requirement can be overwhelming. In order for a new graduate requirement to be feasible and successfully integrated, it needs to be a multi-departmental effort, working with the curriculum structure that is already in place. After all, using the resources we already have is the most sustainable approach to any project. At the end of the 2011 fall semester, I conducted a campus-wide survey, calling upon each department’s academic dean and chair to identify currently-offered courses with elements of sustainability (as defined above). With responses from 25 of the 28 departments, the accumulative list included 109 courses [see appendix B for list]. The registrar then calculated how many students at PLU are taking at least one of these courses within their undergraduate career. The study concluded that over the past 11 years, 89.58% of students fit that category [see appendix B for full results]. This goes to show that institutionalizing a sustainability GenEd is not as far away from a reality as we might have thought; many faculty already offer, and most students already take, courses on sustainability. You might ask, if sustainability is already present in the curriculum, then what good comes from the requirement? A GenEd covers 100 percent of students, with an increased awareness to institutional commitment, and it makes it possible to support and create conversation among faculty who teach these courses.

Student support

In addition to commitments the university has made and the educational values of our education system, sustainability in the curriculum is an element that students value and advocate for in their education.

In March, with the help of a Green Fees grant, I organized an off-campus workshop designed to engage 20 PLU students in the discussion of sustainability. Discussion- and activity-based, the workshop encouraged students to engage with the definition of sustainability and widen their

perspective on what sustainability holistically encompasses. Learning outcomes included being able to describe and analyze sustainability as the triple bottom line, being able to discuss why sustainability should be interdisciplinary, connecting students from multiple departments, extracurricular involvement, and vocational interests with sustainability's objectives, and creating a better understanding of the important role sustainability plays in our society and therefore the fundamental role it should play in our education. Exercises, discussions, and excursions were representative of critical engagement that would occur in the classroom [contact Sustainability Manager, Chrissy Cooley for examples]; students were active, enthusiastic, and passionate. Post-workshop evaluations showed that indeed the workshop influenced their definition and view of sustainability and helped to develop the role of sustainability in their personal values, objectives, and vocation. [See appendix C].

In May 2012, ASPLU passed a resolution stating "ASPLU fully supports the implementation of a General Education Requirement (for students obtaining their Undergraduate degree) that specifically addresses the issue of sustainability. We offer our council, resources, and support to individuals moving forward with this implementation and advocate on the behalf of our constituency for increased attention to the issues of Sustainability on and off of our campus." [see appendix D]

Conclusion

Throughout this paper I have illustrated that the value of and commitment to sustainability by PLU is largely present throughout its mission and various educational objectives. We are beginning to act on the commitments we have in PLU 2020, so the time to institutionalize sustainability in the curriculum is now. PLU's goal for students is that "each should leave with a greater sense of his or her place and purpose and with a commitment to lead and serve in a diverse and ever-changing world."¹⁸ Higher education is a privilege, one that should leave us aware of and prepared to address the challenges of our world. Learning about sustainability on a global and local scale is therefore a responsibility. As we work towards making this change, developing the relationship between sustainability, diversity, and justice must be emphasized.

¹⁸ PLU 2020: Affirming Our Commitments, Shaping Our Future, p 55.

A new requirement must reflect on the intersections of all three, as our sustainable future is a problem that affects everyone; this reflection is necessary to determine what the new requirement would consist of.

As faculty dictate and influence the curriculum at PLU, a diverse network of support from professors across multiple departments and disciplines could be greatly influential, and could help to create an even more robust undergraduate education. The department-wide survey demonstrated that sustainability is already taught within our current curriculum. While we are not 100% there, we are not far from creating this institutionalized change; can we design a new requirement to build on what is already happening? Combining the work of sustainability that is currently being done, the enthusiasm from students for an increased interaction with sustainability in their education, the commitments and reaffirmation of values we as an institution have made, and the passion from faculty and staff to work towards a curriculum change, institutionalizing sustainability in our general education is both possible and important.

Appendix A

INTEGRATIVE LEARNING OBJECTIVES OF PACIFIC LUTHERAN UNIVERSITY

Pacific Lutheran University's Integrative Learning Objectives are designed to provide a common understanding of how learning at PLU is targeted. These objectives offer a unifying framework for understanding how our community defines the general skills or abilities that should be exhibited by an individual who is granted a PLU bachelor's degree. Therefore, they are integrative in nature.

University policy, adopted by the Deans' and President's Councils in the summer of 1998, lodges responsibility for the singularly academic components of assessment directly with academic departments, schools, and cross-disciplinary programs and their administrators. The Integrative Learning Objectives (ILOs) are intended to provide these units with a conceptual reference in their efforts to build on and reinforce the goals of the General University Requirements in their own particular curricula, as well as to assist the university in such assessment related activities as general student and alumni surveys. Academic units may refer to the ILOs in their annual assessment reports. Not all ILOs are expected to be dealt with equally by every program, much less by every course. (Any change in the current university policy that lodges primary responsibility for academic assessment with academic units and programs will include consultation with the faculty through its standing governing structure.)

The ILOs do not represent, by themselves, all of our understanding of education. Rather, they are a part of a more complex web of education. One can conceptualize the outcomes of a PLU education in three general categories: knowledge, skills or abilities, and values and attitudes. These outcomes occur simultaneously at the individual course, program or major, and institutional levels. Work to develop and measure or evaluate the learning outcomes of students is connected to and informed by the learning outcomes set by groups of faculty in departments, schools, and programs. Likewise, these activities are guided by the outcomes established by the whole faculty for all PLU graduates. Students' perceptions of the educational process should provide useful feedback at all three levels.

The ILOs, which relate primarily to the skills/abilities domain at the whole institutional level, range from the ability to critically analyze and resolve complex issues and problems to being able to work in and understand constantly changing environments, cultures, and times. They transcend disciplines and specialized knowledge, but are not meant to replace or change the contextualized knowledge base of disciplines and fields. They are meant to serve as a useful framework that unifies education throughout Pacific Lutheran University while disciplinary study provides students with the knowledge and understanding of a field that will allow them to function effectively in their chosen area. With respect to this base of knowledge, these global statements can be made:

- The PLU graduate is expected to have a broad knowledge of the basic liberal arts and sciences.
- The PLU graduate should have an understanding of the interconnections among these basic liberal arts and sciences that provide the broad framework for living with the complexities of life.
- The PLU graduate is expected to develop an in-depth knowledge of a specified area of knowledge designated as a major within the university.
- The PLU graduate should have an understanding of the interconnections among the basic liberal arts and sciences and the in-depth knowledge of her/his specified major area.

The Integrative Learning Objectives

In addition to the knowledge base described above, and an awareness of how different disciplinary methodologies are used, every student at Pacific Lutheran University is expected to develop the following abilities:

A. Critical Reflection

1. Select sources of information using appropriate research methods, including those employing technology, and make use of that information carefully and critically.
2. Consider issues from multiple perspectives.
3. Evaluate assumptions and consequences of different perspectives in assessing possible solutions to problems.
4. Understand and explain divergent viewpoints on complex issues, critically assess the support available for each, and defend one's own judgments.

B. Expression

1. Communicate clearly and effectively in both written and oral forms.
2. Adapt message to various audiences using appropriate media, convention, or styles.
3. Create symbols or meanings in a variety of expressive media, both verbal and nonverbal.

C. Interaction with Others

1. Work creatively to identify and clarify the issues of concern.
2. Acknowledge and respond to conflicting ideas, principles, and traditions, identifying common interests where possible.
3. Develop and promote effective strategies and interpersonal relationships for implementing cooperative actions.

D. Valuing

1. Articulate and critically assess one's own values, with an awareness of the communities and traditions that have helped to shape them.
2. Recognize how others have arrived at values different from one's own, and consider their view charitably and with an appreciation for the context in which they emerged.
3. Develop a habit of caring for oneself, for others, and for the environment.
4. Approach moral, spiritual, and intellectual development as a life-long process of making informed choices in one's commitments.

5. Approach one's commitments with a high level of personal responsibility and professional accountability.

E. Multiple Frameworks

1. Recognize and understand how cultures profoundly shape different assumptions and behaviors.
2. Identify issues and problems facing people in every culture (including one's own), seeking constructive strategies for addressing them.
3. Cultivate respect for diverse cultures, practices, and traditions.

(Note: even though these objectives are listed here as discrete elements, they are highly interconnected.)

Appendix B:

The study that was conducted to evaluate how much 'sustainability' was being taught in the curriculum.

These courses have been approved by Department Chair's or Dean's as courses that have elements of the following criteria (2 or more P's of the people, planet, prosperity):

Sustainability means care for people, the planet, and prosperity, both now and in the future. Teaching about sustainability requires critically analyzing and engaging the inseparable importance of environmental, economic, and ethical principles. (professors were also given the extended explanation of each P, as it is found at the beginning of this paper.)

Course count: 109

ANTHROPOLOGY

Anth 102: Intro to Cultural Diversity

Anth 210: Global Perspectives: The World in Change

Anth 220: Peoples of the World

Anth 330: Native North Americans

Anth 332: Prehistory of North America

Anth 336: Peoples of Latin America

Anth 340: The Anthropology of Africa

Anth 342: Pacific Island Cultures

Anth 343: East Asian Cultures

Anth 350: Women and Men in World Cultures

Anth 365: Prehistoric Environment and Technology: Lab Methods in Archaeology

Anth 368: Edible Landscapes

Anth 370: The Archaeology of Ancient Empires

Anth 376: Nation, State, Citizen

Anth 380: Sickness, Madness and Health (Medical anthropology)

BIOLOGY

Biol 111: Biology and the Modern World (maybe)

Biol 116: Introductory Ecology

Biol 201: Introductory Microbiology (maybe)
Biol 356: Economic and Cultural Biology
Biol 366: Comparative Ecology of Latin America
Biol 367: Conservation Biology & Management
Biol 387: Virology (maybe)
Biol 448: Immunology (maybe)
Biol 462: Plant Diversity and Distribution

BUSINESS

Busa 201: Introduction to Business in the Global Environment
Busa 303: Business Law and Ethics
Busa 304: Law and Ethics for Financial Professionals
Busa 308: Principles of Marketing
Busa 352: Global Management
Busa 362: Sustainable Marketing

CHEMISTRY

Chem 104: Environmental Chemistry

COMPUTER SCIENCE AND COMPUTER ENGINEERING

Csce 320: Software Engineering (maybe)
Csce 499: Capstone (maybe)

ECONOMICS

Econ 101: Principles of Microeconomics
Econ 102: Principles of Macroeconomics
Econ 111: Principles of Microeconomics: Global and Environmental
Econ 311: Energy and Natural Resource Economics
Econ 313: Environmental Economics
Econ 315: Investigating Envt & Econ Change
Econ 325: Industrial Organization and Public Policy (maybe)
Econ 333: Economic Development: Comparative Third World Strategies

Note: All Economics courses address the topics described as “sustainability” above, however for the purpose of this list, only the classes listed above will be counted

EDUCATION

Educ 410: Science/ Health in K-8 Education (maybe)

Educ 420: Health, Safety, and Nutrition (maybe)

Educ 566: Elementary Math and Science (maybe)

Educ 562: Schools and Society (maybe)

ENGLISH

Engl 213: Topics in Literature: Themes and Authors

Engl 232: Women’s Literature

Engl 234: Environmental Literature

Engl 341: Feminist Approaches to Literature

Engl 385: Special Topics in Creative Nonfiction (sometimes)

ENVIRONMENTAL STUDIES

Envt 350: Environmental Methods of Investigation

Envt 498: Interdisciplinary Inquiry and Analysis

GEOSCIENCE

Geos 102: General Oceanography

Geos 103: Earthquakes, Volcanoes, and Geologic Hazards

Geos 104: Conservation of Natural Resources

Geos 105: Meteorology

Geos 107: Global Climate Change

Geos 109: The Geology of Energy

Geos 201: Geologic Principles

Geos 332: Geomorphology

Geos 334: Hydrogeology

HEALTH EDUCATION

Heed 266: Nutrition, Health and Performance

Heed 395: Comprehensive School Health

HISTORY

Hist 355: History of US Popular Culture

Hist 370: Environmental History of the US

INTERNATIONAL HONORS

Ihon 253: Gender, Sexuality, and Culture

Ihon 257: The Human Experience

Ihon 258: Self, Culture, and Society: Africa's Triple Heritage

Ihon 258: Self, Culture, and Society: Colonizations in the Americas

Ihon 326: The Quest for Social Justice: Systems and Reality

Ihon 327: Personal commitments, global issues

LANGUAGES AND LITERATURE

Lang 272: Literature and Social Change in Latin America

MATHEMATICS

Math 123: Modern Elementary Math I: Number Sense and Algebraic Sense (sometimes)

Math 124: Modern Elementary Math II: Measurement, Geometric Sense, Statistics and Probability
(sometimes)

Math 341: Introduction to Mathematical Statistics (potential)

Math 446: Mathematics in the Secondary School (sometimes)

NURSING

Nurs 260: Professional Foundations I

Nurs 365: Culturally Congruent Health Care

Nurs 430: Nursing Situations with Communities

Nurs 460: Health Care Systems and Policy

PHYSICAL EDUCATION

PHED 324: Lifespan Physical Activity & Health

PHED 366: Health Psychology

PHED 384: Health and Fitness Promotion

PHYSICS

Physics 125: College Physics I*

Physics 126: College Physics II*

Physics 153: General Physics I*

Physics 154: General Physics II*

* Sometimes instructors assign problems about efficiency of appliances, cost to run a car, etc.

Additional class: Energy (J-term class 2011)

PHILOSOPHY

Phil 125: Ethics and the Good Life

Phil 225: Business Ethics

Phil 226: Environmental Ethics

Phil 230: Philosophy, Animals, and the Environment

POLITICAL SCIENCE

Pols 231: Current International Issues (maybe)

Pols 322: Scandinavia and World Issues (maybe)

Pols 345: Gov't and Public Policy

Pols 346: Environmental Politics and Policy

Pols 353: United States Citizenship and Ethnic Relationships

Pols 380: Politics of Global Development

Pols 384: Scandinavian Government and Politics (maybe)

PSYCHOLOGY

Psyc 430: Peace Psychology

RELIGION

Reli 239: Environment and Culture

Reli 247: Women, Nature and the Sacred

Reli 365: Christian Ecological Ethic

Reli 393: Native Traditions in the PNW

SOCIOLOGY

Soci 240: Social Problems

Soci 296: Social Stratification

SOCIAL WORK

Socw 245: Human Behavior and the Social Environment

Socw 250: Social Policy I: History of Social Welfare

Socw 350: Social Policy II: Social Policy Analysis

Socw 360: Social Work Practice I: Interviewing and Overview of Generalist Practice (maybe)

Question: of the undergraduate students who graduated in a given year, how many took at least one of the 'sustainability courses' listed above at some point in their tenure?

| Academic Year | LEVL | % of students graduated having taken a sustainability course | # of students who took a sustainability course | Total # of students graduated |
|---------------|------|--|--|-------------------------------|
| 2000 | UG | 85.52% | 632 | 739 |
| 2001 | UG | 91.73% | 677 | 738 |
| 2002 | UG | 88.35% | 690 | 781 |
| 2003 | UG | 87.28% | 645 | 739 |
| 2004 | UG | 87.34% | 621 | 711 |
| 2005 | UG | 91.77% | 680 | 741 |
| 2006 | UG | 88.52% | 717 | 810 |
| 2007 | UG | 90.42% | 717 | 793 |
| 2008 | UG | 91.13% | 688 | 755 |
| 2009 | UG | 91.00% | 657 | 722 |
| 2010 | UG | 93.50% | 763 | 816 |
| 2011 | UG | 88.36% | 167 | 189 |

Appendix C:

You + Sustainability Evaluations

Questions

1. What was your conception of sustainability before the workshop?
2. How has it changed/ expanded?
3. Connections to values/ vocation?
4. Importance of sustainability?
5. Was the workshop successful?
6. What improvements can be made?
7. Would you recommend the workshop?

(For the sake of space, I did not include all 20 evaluations. Below are a select few. For a more thorough report of the workshop, contact Sustainability Manager, Chrissy Cooley.)

Evaluation

1. Sustainability had to do with recycling, affects to the environment, being green.
2. Sustainability is all about people, planer, prosperity: the interconnectedness of the three. Sustainability is a process that requires community support, it is intergenerational, and it is integral to the health of a community.
3. Yes. I have come to understand how important community is more and more since I've been at PLU and seeing how sustainability fits into that has been great.
4. It isn't just for environmental studies majors. Sustainability is a community effort and it affects us all.
5. The tools like the personal narrative, fruit/trunk/roots exercise
6. Maybe rather than worrying about sticking to a schedule, allotting more time to certain activities.
7. Absolutely. It was wonderfully coordinated, informative, facilitated, and fun. Thank you.

Evaluation

1. At the beginning of the workshop I thought about sustainability in terms of environment and resources, especially how we distribute and share resources between people and nature.
2. I connected my sustainability vision with social justice more than it already was and started to think of relationships within communities as being an opportunity for sustainability.
3. Yes, sustainability has been something I've been passionate about for a while but this workshop taught me more about how to advocate for my values in this and other arenas.
4. I always thought sustainability was important but now I see ways to apply it to pretty much every situation.

5. Thinking about root causes and also about why I personally care about sustainability and how I can use that to encourage and motivate others was really helpful.
6. We had a hard time staying on schedule so that's an area that could be improved.
7. If this happened again, I would definitely recommend it.

Evaluation

1. Sustainability relating more to the idea surrounding recycling. My conception wasn't in depth, perhaps lacking in knowledge and information.
2. My perception now is more encompassing of a variety of ideas relating to sustainability itself. The idea of 'balance' is one idea which I have picked up upon more readily- the notion that not all issues can be solved fully, but that compromises can be made to tackle issues more head on. The underlying structures that effect sustainability are also more clear now.
3. Yes, in particular the idea of social justice came across as relating to my ideas and values.
4. Through the ability to see sustainability in a wider context- not just through personal problems and solutions
5. Trips out, successful, connecting to nature. Group work, allowed for ideas to be bounced off each other. The importance of community.
6. The workshop was quite intensive at times, tiredness, perhaps shorter breaks throughout the day.
7. 100% yes. The workshop was incredibly helpful and effective.

Evaluation

1. Before the workshop, my view of sustainability was science-oriented. Specifically, how we can exist on Earth. Using resources, while preserving the Earth for future generations.
2. Throughout the weekend I've come to realize that sustainability is grounded on so many crucial issues that involve social justice, consciousness of environment and relationships and community building. I feel I've made some important sustainable connections to my passions in that no matter what I choose to pursue, I want to be working at root issues instead of just the fruits.
3. While sustainability has always been important to me, it was a vague value. Sustainability appears to be a basic human value of the needs of others, my own privileged desires, and the healthy growth of human community on Earth.
- 4.
5. I really enjoyed the facilitators, Mia and Allen, and having knowledgeable and passionate individuals is key to a conference like this. I also loved visiting the eco village to see the reality of trying to live sustainably in many ways.
6. I think there could be some important improvements in terms of time. If the conference could take place over a three-day weekend there could be more relaxation and processing of experience.

7. Recommendation any day! This has an amazing workshop. Thanks for all of your hard work and passion!

Evaluation

1. The words people, planet, prosperity, but not their meaning. Recycle, energy awareness, etc
2. Learned a little more about people, planet, prosperity. Sustainability is more than just recycling, but it's a way of life and a way to build community. Have a real approach to use to talk to people about these issues (narratives). Overall awareness of how these issues impact us beyond our own neighborhood – but the world around us.
3. Want to be able to share my knowledge with others. Also want to be educated more so I can share and educate others. I really like nature and how sustainability can connect to that – so this weekend I've been thinking about how in my career path of working with youth – how I can incorporate sustainability into my work with youth through trips like we did.
4. See 2
5. Having a good framework to use to share info
6. I came with a very basic level of knowledge of sustainability – so for educating people with my understanding might include more introductions, being brief with basics might be annoying for people who know, but really helpful for unknowledgeable people.
7. Yes!

Appendix D

ASPLU resolution



PACIFIC LUTHERAN UNIVERSITY

Associated Students
Tacoma, Washington 98447-0003
Phone: 253/535-7480
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Resolution 20

2011-12 Regular

ASPLU Senate
Session

Authored by: Executive Senator Borges

Sponsored by: Senator Kim

Read first time: 05/08/2012

Date passed: 05/15/2012

An act relating to ASPLU's support and dedication to Sustainability at PLU.

BE IT ENACTED BY THE SENATE OF THE ASSOCIATED STUDENTS OF PACIFIC LUTHERAN UNIVERSITY:

Sec 1. Whereas, ASPLU is committed to upholding the beliefs and values of the students of Pacific Lutheran University and to honor the PLU mission statement, "to educate students for lives of thoughtful inquiry, service, leadership and care – for other persons, for their communities and for the earth."

Sec 2. During the 2011-2012 academic year, PLU released PLU 2020: Affirming Our Commitments, Shaping Our Future in an effort to recommit itself to this mission and developed new goals to track the university's progress. In accordance with this document, PLU has identified an increased dedication to become more sustainable and integrate sustainability into its curriculum. PLU 2020 states that by our goal date, we will "make substantial innovations in the curriculum and in our co-curricular programs so that PLU students are better prepared to work toward a sustainable future for the rest of their lives".

Sec 3. Whereas, the current curriculum does not explicitly include aspects of sustainability and students are not required to have completed courses that allow them to gain education and implement action around sustainability.

Sec 4. Whereas, sustainability is an issue of our past, present and future, ASPLU fully supports the implementation of a General Education Requirement (for students obtaining their Undergraduate degree) that specifically addresses the issue of sustainability. We offer our council, resources, and support to individuals moving forward with this implementation and advocate on the behalf of our constituency for increased attention to the issues of Sustainability on and off of our campus.

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