

Environmental Sustainability Certificate Program

Glemaud, Rose-Ketlie

From: Mallery, Charles H.
Sent: Monday, September 16, 2013 9:44 AM
To: Glemaud, Rose-Ketlie
Subject: Items from Curriculum Committee for College Council
Attachments: Modified Sustainability Certificate September.pdf; ATT00001.htm; Repeal of ECS second major August 2013.pdf; ATT00002.htm

Rose,

At its regularly scheduled meeting Friday (Sep 13, 2013) the Curriculum Committee approved proposals for:

1. the Repeal of the 2nd Major Requirement in ECS and
2. a Certificate in Sustainability

Copies of these proposal are attached to be agenda's for the College Council.

Thanks,

charles mallery, associate dean college of arts & sciences
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Environmental Sustainability Certificate Program For Undergraduate Students

By Claire Bailey, with input from the ECO Board,
Student Government

Faculty Advisor: Gina Maranto, Director,
Ecosystem Science and Policy

Goal

We propose the creation of a **multidisciplinary Environmental Sustainability Certificate Program for full-time undergraduate students who complete 18 credits, including the “Global Sustainability” cognate and additional courses related to sustainability from an approved list.** It is assumed that “sustainability” primarily refers to practices designed to preserve and/or enhance environmental resilience, but other forms of sustainability (economic, social) could be relevant, depending on a student’s particular trajectory.

Rationale

Knowledge of sustainability is now a requisite for a growing number of professions, as businesses, organizations, and educational institutions confront the challenges of a rapidly modernizing and increasingly connected world subject to climate change, mass movements of people, limits to energy and water supplies, and diminishing biodiversity.

There are dozens of graduate certificates in sustainability across the U.S. In recent years, many institutions, including University of Colorado at Boulder, University of Utah, Wellesley College, Babson College, Olin College, and Florida International University, have also implemented undergraduate sustainability certificate programs in order to prepare their students for the rapidly evolving job market and equip them with the knowledge, skills, and strategies related to sustainable practices. These programs require a low of 15 credits (Wellesley/Babson/Olin) and a high of 20 (FIU). (See Appendix 1 for details of those programs, which have varying requirements for core and elective courses.)

We have established that there is student demand for an undergraduate certificate in sustainability. During Spring semester 2013, the ECO Board carried out a survey to assess student interest in such a program. In connection with an ECO sponsored tabling event in the UC, students were asked to complete an online survey. A total of 488 individuals completed the survey; 33 were excluded because they were not UM undergraduates. To the question, “Would you be interested in gaining a Sustainability Certificate,” 160 (32.26%) of the 455 undergraduates answered, “Yes, definitely;” 181 (36.49%) answered, “Yes, maybe; depends on my other course requirements;” and 120 (24.29%) answered, “Yes, but could not fit it in at this time.” Thirty-five students (7.06%) answered, “No, holds no interest.” We believe this indicates strong interest among undergraduates for such an opportunity. (See Appendices 2 and 3 for more details of the survey.)

To obtain the sustainability certificate, students will complete the People & Society cognate “Global Sustainability: Living on a Finite Planet.” (See Appendix 4 for a description of the cognate.) The cognate will earn students 9 of the 18 credits needed for the Sustainability Certificate.

In addition, students will take 9 credits from courses included in the cognate or from a list of approved courses. Any courses within the “Global Sustainability” cognate not being used to satisfy the cognate may count for the certificate. We have also identified other courses across the University that contain a sustainability and/or eco-literacy component. (See Appendix 5 for the course list, which will be reviewed and updated annually; additional courses could qualify with approval of the program administrators in Ecosystem Science and Policy.) Students could take the additional 9 credits to align with their major or minor, or individual interests (e.g., energy, green buildings, natural resource management). The list accordingly includes courses specific to various areas of study that may require one or more prerequisites

Students must be enrolled full time and all courses for the Certificate must be passed with no lower than a “C” grade.

Students who successfully complete the program will receive a notation on their transcripts to that effect.

Outcomes

The certificate program will:

- Equip students with knowledge and skills for implementing positive change through environmentally responsible practices in various fields
- Serve as a curricular adjunct to sustainable initiatives at UM
- Foster a culture of conservation at the University
- Enhance students’ preparation for a variety of careers, including engineering, architecture, business, marketing, government, and more
- Affirm UM’s commitment to sustainability and complement its efforts to enhance environmental education

Estimated Costs

There are expected to be minimal costs. The undergraduate ECS director and assistant director will administer the program, setting up the requisite monitoring in Canelink, performing the relevant processing for students who indicate they are pursuing the Certificate, handling any queries regarding the program, approving course substitutes on an as needed basis, and carrying out audits to ensure students have completed all requirements before being awarded the Certificate.

Timeline

Presuming all approvals are secured, we expect the certificate to be available to students starting with the 2014-15 school year. The ECO Agency will assist in publicizing the availability of the certificate.

Appendix 1: Undergraduate Sustainability Certificates at other institutions

University of Colorado, Boulder Renewable and Sustainable Energy Institute (RASEI) Undergraduate Certificate Program

<http://rasei.colorado.edu/>

"There is a clear and growing societal need for experts in energy, with skills and knowledge that transcend traditional disciplines. What's needed is not just technical expertise, but rather technical competence combined with a broader understanding of the business, policy, economics, and institutional aspects of energy."

-CU-Boulder, Energy Education Committee, Final Report, May 2007

CU-Boulder's undergraduate energy certificate program provides a broad exposure to energy issues, with an emphasis on renewable and sustainable energy. Required coursework on energy science and technology, policy, and economics; coupled with electives on energy and environment, journalism, ethics, and other topics, give students the skills and knowledge to tackle society's pressing energy problems.

Why a certificate program?

Solving society's energy-related problems is not just a technical challenge. It will require contributions from law, business, humanities, journalism, and other disciplines as well. This undergraduate certificate program is intended to supplement, not replace, undergraduate students' degree programs. Graduates from this certificate program—regardless of their undergraduate major—will have a strong understanding of energy science and technologies, energy alternatives, energy markets and business, and energy policy. They will be well-prepared to apply their disciplinary knowledge to the energy challenge.

Participating Faculty/Program Governance

Paul Komor, Energy Education Director and Lecturer in Environmental Studies, directs and manages this program. Decisions about the program, including those related to course requirements and admissions, are made by the Energy Certificate Committee. Members of this Committee are:

- William Boyd, Law
- Paul Komor, Renewable and Sustainable Energy Institute
- Michael Hannigan, Mechanical Engineering
- Steve Lawrence, Leeds School of Business
- Keith Stockton, Leeds School of Business
- Tom Yulsman, Journalism

Program Requirements

In order to earn the certificate, students must apply to and be accepted into the program. The certificate program requires 18 hours of coursework: 9 for core courses, and 9 for electives.

The core courses cover the essentials of renewable and sustainable energy:

- The first required course (ENVS/PHYS 3070) provides an understanding of energy science and technology: resources, units of measurement, physical principles and limits, conversion technologies, and environmental impacts.
- The second required course (ENVS 3621) provides an understanding of energy politics, policy, and economics: how society makes decisions about energy, what are the policy tools that can influence energy use and how do they work, how stakeholders interact to yield energy policy decisions.
- The third required course (RSEI 4150) is a projects course, in which students' energy knowledge is applied to a specific energy challenge or problem.

These core courses are followed by electives, which allow students to focus on specific areas that are of interest. These electives are varied, however they all share a focus on energy.

Core/Required Courses

Students must take the three courses listed below, and achieve a grade of C or better in all three courses.

ENVS/PHYS 3070

Energy and the Environment. Contemporary issues in energy consumption and its environmental impact, including fossil fuel use and depletion; nuclear energy and waste disposal; solar, wind, hydroelectric, and other renewable sources; home heating; energy storage; fuel cells; and alternative transportation vehicles. Included are some basic physical concepts and principles that often constrain choices. No background in physics is required. Approved for arts and sciences core curriculum: natural science. Offered Fall and Spring semesters.

NOTE: ECEN 1500 'Sustainable Energy' can also be substituted for ENVS/PHYS 3070

ENVS 3621

Energy Policy and Society. Examines how society makes decisions about energy, and how these decisions affect the environment and the economy. Uses tools from policy analysis, economics, and other disciplines to build an in-depth understanding of energy's role in U.S. contemporary society. Offered Spring semester.

RSEI 4150 Energy Project

This projects course will apply students' energy knowledge to a particular problem or issue. The specific problem would vary by semester and instructor, however example problems include: Developing a plan for CU to meet its carbon neutrality goals, assessing Boulder's potential for increased energy efficiency, analyzing options for Colorado to increase its use of renewable energy, and developing recommendations for Colorado's role in the Western Climate Initiative. Students will be expected to develop a policy-relevant class final report/plan, and present it to decision-makers. Offered Fall semester.

Elective Courses

Students must take 9 credits of qualifying electives. Any of the energy [courses](#) listed at the RASEI web site can count as an elective. In addition, the following courses can also count as electives:

ATOC 3500 Air Chemistry and Pollution

ATOC 4800 Policy and Climate

BADM 4820 Business Opportunities in a Resource Constrained World

ECON 4555 Transportation Economics (Hughes)

ENVD 4035 Solar and Sustainable Design

ENVD 4363 Planning for Environmental Sustainability

ENVS 3100 Sustainability Consulting

GEEN 3300 Sustainability and Ethics

JOUR 4871 Topics in Environment, Media, and Culture

JOUR 5822 Reporting on the Environment (Ackland)

MGMT 4080 Sustainable Operations

PHYS 3000 Science and Society (Peterson)

This list will be modified when new energy-relevant courses are offered. Existing courses can be nominated for this list as well – see the FAQ section below.

How To Apply

Only currently enrolled CU-Boulder undergraduate students are eligible for the program (although the core courses are open to all students). This includes part-time students, but is limited to students who are in an undergraduate degree program. Students in joint undergraduate/graduate degree programs are not eligible, but should instead consider the graduate energy certificate program.

Applications to the program are accepted starting February 1, with all applications and application materials due by March 1. Admissions decisions are made by April 1. Acceptance will be based on the qualifications of the student, as well as the importance of fostering a diversity of disciplinary representation within the program.

Applicants need to submit the following:

A current CU-Boulder transcript.

A one-page statement of purpose: Why do you want to enroll in this program?

All materials should be submitted electronically as PDF attachments, emailed to RASEI-Education@colorado.edu. Make sure your name is on both PDF documents. Please name your files LastName_Transcript and LastName_Statement.

Frequently Asked Questions

Does successful completion of the certificate program show up on my official CU-Boulder transcript?

Yes.

Is this program open to non-students/working professionals/CU-Boulder staff/etc.?

We offer a [Professional Certificate in Renewable Energy](#) to non-students.

Can a specific course be used to satisfy the certificate program requirements and my home department/program requirements - at the same time?

Probably. The certificate program allows for this. However, you should check with your home department/program to ensure that they allow this.

I'm in the Engineering/Music/Business/etc. program at CU-Boulder. Can I apply for the program?

Yes. All CU-Boulder undergraduate students are eligible for this program.

Are there any course prerequisites for the program?

No. The first core course, ENVS/PHYS 3070, provides basic energy knowledge.

I would like to nominate a course for inclusion on the list of qualifying electives. How do I do that?

Send an email to RASEI-Education@colorado.edu with details on the course, including a syllabus or web site link if available. We'll review it and let you know if it qualifies.

Do you have a specific question that's not answered in the FAQ section?

If so, send an email to RASEI-Education@colorado.edu. We'll get back to you.

**University of Utah
Sustainability Certificate**

<http://ugs.utah.edu/sustainability-certificate/requirements.php>

The Certificate requires 19 student credit hours and has four components:

1. Required Introductory Course (3 credits)

- [UGS 2210](#) – opens new window– external link: Imagined Landscapes, Visions of Sustainability

2. Electives (12 credits)

- At least 6 credits from the list of approved [Sustainability-Focused Electives](#); the remaining 6 credits can come from either the Related or Focused lists
- At least 9 credits must be at the 3000 or above level
- At least 6 credits must be taken outside of the student's home college
- Courses not included in the list of Approved Sustainability Electives but individually approved by the SCAC (Sustainability Certificate Advisory Committee)

3. Final Project Preparation (1 credit)

- Taken as a precursor to and the semester before the Final Project

4. Final Project (3 credits)

Must focus on sustainability and be approved by the SCAC. Some possibilities:

- Course or independent study providing a comprehensive project-based learning experience
- [Study abroad program](#)– external link
- [Service learning experience](#)– external link
- Research project, e.g. [UROP](#)– external link
- Other

**Wellesley College, Babson College, Olin College
Sustainability Certificate**

http://www.wellesley.edu/environmentalstudies/sustainability_certificate

A tri-campus collaboration program of Wellesley, Olin, and Babson Colleges

Wellesley Program Contact: Professor DeSombre

Program Director: Professor Linder, Olin College

View **[Courses for Credit Toward the Certificate Program](#)**

Addressing the challenge of using earth's resources sustainably requires a collaborative and interdisciplinary approach, in which basic research about the causes and consequences of environmental problems is combined with an understanding of the incentives and processes for a large-scale reworking of economic activity and the technology with which to reconfigure the human effect on the natural world. Wellesley, Olin, and Babson Colleges are uniquely suited to address this challenge by providing a joint program capable of educating students in ways that each cannot accomplish alone. By truly integrating business, engineering, and the liberal arts in the service of environmental sustainability, this program provides students with the cross-disciplinary academic preparation and the cross-campus cultural collaboration experiences needed to approach environmental issues holistically.

Goals for the Program

The Sustainability Certificate Program seeks to educate students to make use of the skills, tools, and concepts from the liberal arts, business, and engineering to address environmental challenges and work to move individuals and society to more sustainable practices.

Courses

SUST 201: Introduction to Sustainability

DeSombre (Wellesley), Linder and Stolk (Olin), George (Babson) | Fall 2012 | 1.0 unit

This case-based course introduces students to the basic concepts and tools that business, engineering, and the liberal arts (science, social science, and the humanities) bring to a consideration of sustainability. It is team-taught by three faculty members, one from each institution, with coursework fully integrated across the three approaches. The course will draw empirical material from, and apply concepts and tools to the sustainability of a city block.

Prereq: None; Registration by permission only (contact Beth DeSombre (edesombr@wellesley.edu)); Not open to seniors.

Dist: None

SUST 301: Sustainability Synthesis

Turner (Wellesley), Mechtenburg (Olin), Hunt (Babson) | Spring 2013 | 1.0 unit

This case-based course introduces students to the basic concepts and tools that business, engineering, and the liberal arts (science, social science, and the humanities) bring to a consideration of sustainability. It is team-taught by three faculty members, one from each institution, with coursework fully integrated across the three approaches. The course will draw empirical material from, and apply concepts and tools to, a semester-long case (such as the sustainability of a city block, the transition to clean energy worldwide, or the life-cycle of a

common consumer product).

Prereq: Declared participation in the certificate program, and completion of SUST 201 and three out of four elective courses for the program.

Dist: None

Requirements

There are three components to the 5-course certificate program:

1. Introductory Course (SUST 201)
2. Synthesis Course (SUST 301)
3. Three electives from the list of Courses for Credit Toward the Certificate Program. Those three electives, chosen from the list above (with the possibility of petitioning to accept a course not on this list), must include one course at each of the two non-home institutions (i.e. a Wellesley student would have to take one course at Babson and one at Olin) and one course in each of the two non-home areas – business, engineering, and the liberal arts – (i.e. a Wellesley student must take a business course and an engineering course). These courses provide an interdisciplinary breadth of knowledge, skills and experiences relating to environmental sustainability. (Several courses include the requirement that the major course project a student chooses focus on sustainability issues.)

Admission to the Program

Students may declare their intention to pursue the certificate program any time after completing the introductory course; they must do so before enrolling in the synthesis course. Students with declared program participation will have preferential enrollment opportunities for the cross-campus electives. Upon declaring the intention to pursue the program, the student will be given a campus advisor; students may also contact the overall program director. Advising is a central part of ensuring a coherent structure to the certificate program, so students are encouraged to declare their intention to complete the program as soon as they can.

Record of Completion

The record of completion of the program will appear on the Wellesley transcript.

Additional Information

For more information about program admission and course of study, contact Beth DeSombre, the Certificate Program contact for Wellesley. For detailed certificate program information, please visit the forthcoming Sustainability Certificate Program website. Please visit [Babson](#) and [Olin College](#) websites for detailed information on their courses offered.

Florida International University
Environmental Studies Certificate
<http://catalog.fiu.edu/index.php?id=2353§ion=collegesandschools&college=1&parent=2350>

Environmental Studies Certificate Program

Ray Scattone, *Director, Environmental Studies*

Coordinating Committee

Mahadev Bhat, *Environmental Studies/Economics*

Kevin Hill, *Political Science*

Suzanne Koptur, *Biology*

Rod Neumann, *International Relations*

Laura Ogden, *Sociology/Anthropology*

The Certificate Program in Environmental Studies is designed to provide students in various majors with the unique perspective of interdisciplinary ecological education to both enrich and expand the breadth of their primary training. The Certificate seeks to provide participants with an analytic basis for understanding the milieu of local and global environmental problems and processes.

The program requires no prerequisite and is complementary to majors in all disciplines and schools at the University. This certificate is appropriate also for persons who already have a degree but would like to increase their knowledge of contemporary environmental issues.

Requirements

The curriculum for the Environmental Studies Certificate consists of six courses (18-20 credits).

I. Two Environmental Science Courses:

EVR 3011/L Environmental Pollution and Lab

EVR 3013/L Ecology of South Florida and Lab

Students with science backgrounds should take instead two environmental science courses from the following:

EVR 4026 Biotic Resources

EVR 4211/L Water Resources and Lab

EVR 4231 Air Resources

EVR 4310 Energy Resources

II. Two additional Environmental Social Sciences courses from the following:

ANT 3403 Cultural Ecology

GEO 3421 Cultural Geography

ECP 3302 Environmental Economics

EVR 4415 Population and Environment Issues

EVR 4352 U.S. Environmental Policy

INR 4350 International Environmental Policy

PUP 3206 International Law and the Environment

PUP 4203 Environmental Politics

REL 3492 Earth Ethics

III. Two additional Environmental Electives from the following:

AMH 4930 Environmental History

ANT 3403 Cultural Ecology

ANT 4552 Primate Behavior and Ecology

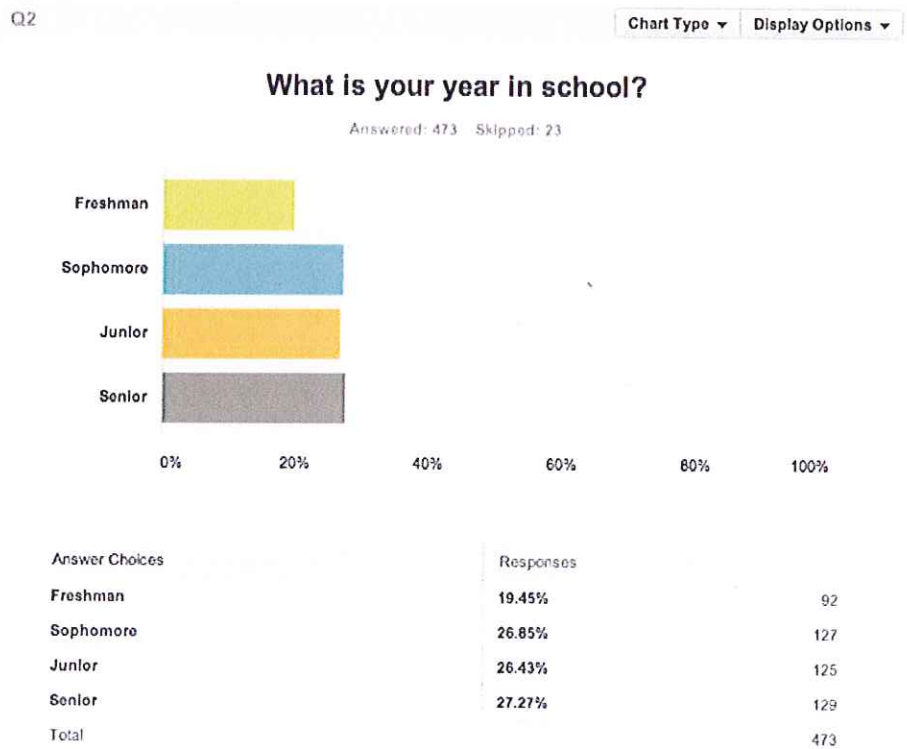
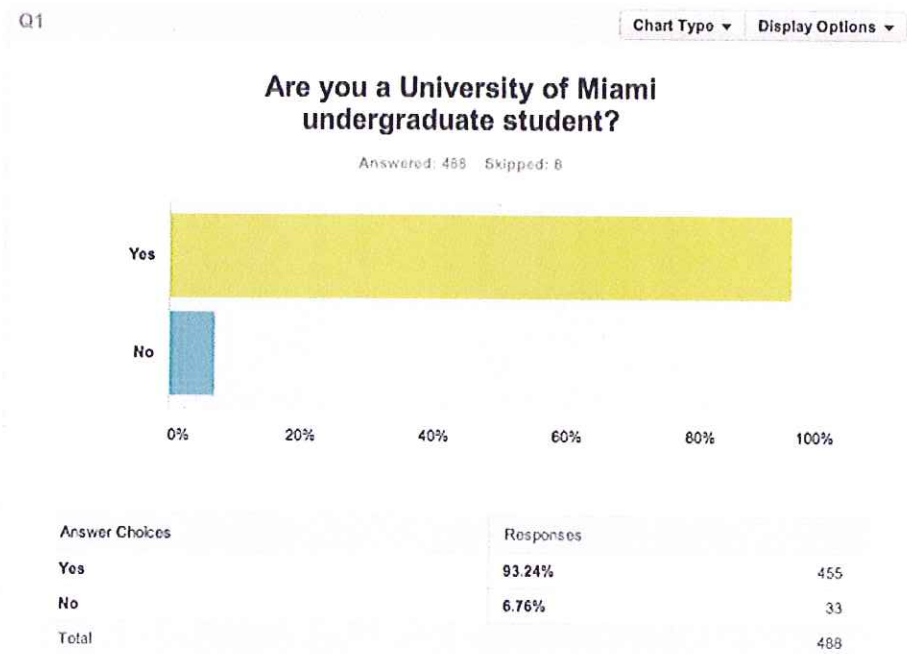
ANG 5403 Ecological Anthropology

BOT 3014 Plant Life Histories

BOT 3153 Local Flora & Lab

BSC 5825	Wildlife Biology
ECP 3302	Introduction to Environmental Economics
ECP 4314	Land and Resource Economics
ENY 4060	Advanced Entomology & Lab
EVR 3010	Energy Flows in Natural and Man-Made Systems
EVR 3013	Ecology of South Florida & Lab
EVR 4026	Biotic Resources
EVR 4211	Water Resources
EVR 4231	Air Resources
EVR 4310	Energy Resources
EVR 4321	Sustainable Resource Development
EVR 4323	Restoration Ecology
EVR 4351	U.S. Energy Policy
EVR 4352	U.S. Environmental Policy
EVR 4401	Conservation Biology
EVR 4415	Population and Environment Issues
EVR 4905	Independent Study
EVR 4934	Special Topics
EVR 5061	South Florida Ecology
EVR 5065	Ecology of Costa Rican Rainforest
EVR 6067	Tropical Forest Conservation
EVR 6300	Topics in Urban Ecology
EVR 5313	Renewable Energy Sources
EVR 5320	Environmental Resource Management
EVR 5353	International Energy Policy
EVR 5355	Environmental Resource Policy
EVR 6406	U.S. Endangered Species Management
EVR 5410	Human Population & Earth's Ecosystem
EVR 5907	Research and Independent Study
EVR 5935	Special Topics
EVR 5936	Topics in Environmental Studies
GEO 3510	Earth Resources
GEO 3421	Cultural Geography
GLY 3039	Environmental Geology & Lab
HFT 3701	Sustainable Tourism
INR 3043	Population and Society
INR 4054	World Resources, World Order
INR 4350	International Environmental Politics
LIT 4930	Literature and the Environment
MCB 4603	Microbial Ecology
PCB 3043	Ecology & Lab
PHI 3640	Environmental Ethics
PUP 3206	International Law and the Environment
PUP 4203	Environmental Politics
REL 3492	Earth Ethics
SOP 4712	Environmental Psychology
SYP 4421	Man, Society and Technology
ZOO 3892C	Biology of Captive Wildlife
ZOO 4462C	Herpetology
Total Credit Hours:	18-20

Appendix 2: Survey data questions 1, 2, 3, and 5 in graphic format

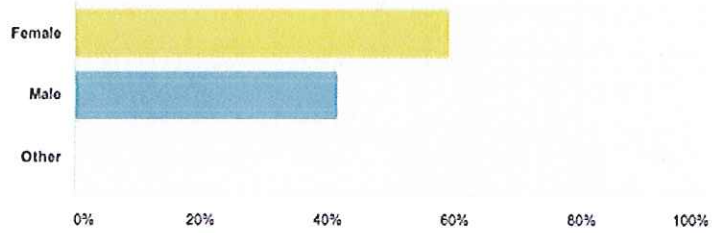


Q3

Chart Type ▾ Display Options ▾

What is your gender?

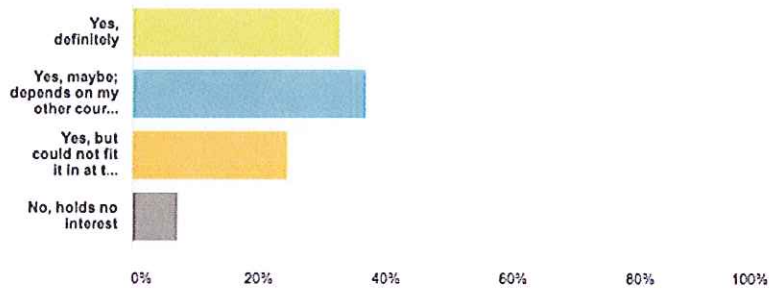
Answered: 495 Skipped: 1



Answer Choices	Responses	Count
Female	58.79%	291
Male	41.21%	204
Other	0%	0
Total		495

Would you be interested in gaining a Sustainability Certificate?

Answered: 496 Skipped: 0



Answer Choices	Responses	Count
Yes, definitely	32.26%	160
Yes, maybe; depends on my other course requirements	36.49%	181
Yes, but could not fit it in at this point	24.19%	120
No, holds no interest	7.06%	35
Total		496

Appendix 3: Survey data sorted by year, response, and major

Survey responses sorted by year, response, and major				
Are you a University of Miami undergraduate student?	What is your year in school?	What is your gender?	What is your major?	We hear a lot about 'sustainability' these days. But what is it, really? As students at UM, we thought it would be great to provide a try for everyone to find out about sustainability in enough depth that you could get a sustainability certificate on your transcript when you graduate. Dozens of other schools around the U.S. have similar certificates. Would you be in favor of enabling UM students to gain a Sustainability Certificate by completing 11 credits (roughly 6 courses), including courses geared toward your own major? Students in the ECO Agency and prime job candidates in multiple fields. Would you be interested in gaining a Sustainability Certificate?
Yes	Freshman	Male	Accounting	Yes, definitely
Yes	Freshman	Male	Biology	Yes, definitely
Yes	Freshman	Male	Biomedical engineering	Yes, definitely
Yes	Freshman	Female	Business	Yes, definitely
Yes	Freshman	Male	chee	Yes, definitely
Yes	Freshman	Male	Communication Studies	Yes, definitely
Yes	Freshman	Female	communications	Yes, definitely
Yes	Freshman	Female	Economics	Yes, definitely
Yes	Freshman	Female	ECO	Yes, definitely
Yes	Freshman	Male	English	Yes, definitely
Yes	Freshman	Female	English	Yes, definitely
Yes	Freshman	Female	Health Science Business Administration	Yes, definitely
Yes	Freshman	Female	human and social development	Yes, definitely
Yes	Freshman	Female	INS and Political Science	Yes, definitely
Yes	Freshman	Male	International Studies	Yes, definitely
Yes	Freshman	Female	international studies	Yes, definitely
Yes	Freshman	Female	Marketing	Yes, definitely
Yes	Freshman	Female	neuroscience	Yes, definitely
Yes	Freshman	Female	Neuroscience	Yes, definitely
Yes	Freshman	Female	nursing	Yes, definitely
Yes	Freshman	Male	Public Health	Yes, definitely
Yes	Freshman	Female	undeclared	Yes, definitely
Yes	Freshman	Male	undeclared	Yes, definitely
Yes	Freshman	Female	Accounting	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	advertising	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Athletic Training	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	bio	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Biology	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Biology	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Biology	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Biology	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Biomedical Engineering	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	broadcast journalism	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	economics	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	English	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Exercise Physiology	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Exercise Physiology	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Finance	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Finance	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Finance	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Health Sciences	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Human and Social Development	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Industrial Engineering	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	International Finance and Marketing	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	International Finance and Marketing	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Journalism	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Journalism	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Journalism	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	mechanical Engineering	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	media management	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	media management	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Motion Pictures	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Motion Pictures, Marketing	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Neuroscience	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Nursing	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	psychology & political science	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Psychology	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	sport administration	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Sports Medicine	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	Undeclared	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	undeclared	Yes, maybe, depends on my other course requirements
Yes	Freshman	Male	undeclared	Yes, maybe, depends on my other course requirements
Yes	Freshman	Female	Biomedical engineering	Yes, but could not fit it in at this point
Yes	Freshman	Female	Biology	Yes, but could not fit it in at this point
Yes	Freshman	Female	Biology and Biochemistry	Yes, but could not fit it in at this point
Yes	Freshman	Male	Chemistry / Ecosystem Science and Polk	Yes, but could not fit it in at this point
Yes	Freshman	Male	Civil Engineering	Yes, but could not fit it in at this point
Yes	Freshman	Male	Finance	Yes, but could not fit it in at this point
Yes	Freshman	Female	finance	Yes, but could not fit it in at this point
Yes	Freshman	Female	kinesiology	Yes, but could not fit it in at this point
Yes	Freshman	Female	marine science and bio	Yes, but could not fit it in at this point
Yes	Freshman	Female	Marketing	Yes, but could not fit it in at this point
Yes	Freshman	Male	Marketing	Yes, but could not fit it in at this point
Yes	Freshman	Male	Neuroscience	Yes, but could not fit it in at this point
Yes	Freshman	Female	Neuroscience	Yes, but could not fit it in at this point
Yes	Freshman	Male	Philosophy	Yes, but could not fit it in at this point
Yes	Freshman	Female	Psychology	Yes, but could not fit it in at this point
Yes	Freshman	Male	Art History	No, holds no interest
Yes	Freshman	Female	Biology	No, holds no interest
Yes	Freshman	Male	Broadcast Journalism and Marketing	No, holds no interest
Yes	Freshman	Male	business	No, holds no interest
Yes	Freshman	Male	economics	No, holds no interest
Yes	Freshman	Male	Economics	No, holds no interest
Yes	Freshman	Female	neuroscience	No, holds no interest

Yes	Freshman	Female	neuroscience	No, holds no interest
Yes	Freshman	Female	Public Relations	No, holds no interest
Yes	Sophomore	Female	advertising	Yes, definitely
Yes	Sophomore	Male	Africana studies and political science	Yes, definitely
Yes	Sophomore	Female	Art History	Yes, definitely
Yes	Sophomore	Female	bio	Yes, definitely
Yes	Sophomore	Female	bio	Yes, definitely
Yes	Sophomore	Male	Biology	Yes, definitely
Yes	Sophomore	Female	Biology	Yes, definitely
Yes	Sophomore	Female	Biology	Yes, definitely
Yes	Sophomore	Male	Biomedical Engineering	Yes, definitely
Yes	Sophomore	Male	Biomedical Engineering	Yes, definitely
Yes	Sophomore	Male	Broadcast Journalism	Yes, definitely
Yes	Sophomore	Female	Chemistry and ecosystem science and ge	Yes, definitely
Yes	Sophomore	Male	Civil Engineering	Yes, definitely
Yes	Sophomore	Female	Economics and English	Yes, definitely
Yes	Sophomore	Male	Ecosystem Science	Yes, definitely
Yes	Sophomore	Male	ECS and GSC	Yes, definitely
Yes	Sophomore	Female	ECS-Bio	Yes, definitely
Yes	Sophomore	Female	Exercise Physiology	Yes, definitely
Yes	Sophomore	Male	Exercise Physiology	Yes, definitely
Yes	Sophomore	Female	Finance	Yes, definitely
Yes	Sophomore	Male	Finance/Accounting	Yes, definitely
Yes	Sophomore	Male	Geography	Yes, definitely
Yes	Sophomore	Male	HSMJ	Yes, definitely
Yes	Sophomore	Male	International Studies	Yes, definitely
Yes	Sophomore	Female	Marine Affairs	Yes, definitely
Yes	Sophomore	Male	Marketing	Yes, definitely
Yes	Sophomore	Male	mathematics	Yes, definitely
Yes	Sophomore	Male	mathematics	Yes, definitely
Yes	Sophomore	Female	Microbiology & Immunology	Yes, definitely
Yes	Sophomore	Male	Neuroscience	Yes, definitely
Yes	Sophomore	Male	Neuroscience/Criminology	Yes, definitely
Yes	Sophomore	Female	nursing	Yes, definitely
Yes	Sophomore	Female	political science and communication stud	Yes, definitely
Yes	Sophomore	Female	Psychology	Yes, definitely
Yes	Sophomore	Male	Public Relations	Yes, definitely
Yes	Sophomore	Female	Sports Administration	Yes, definitely
Yes	Sophomore	Female	Accounting	Yes, definitely
Yes	Sophomore	Female	Advertising	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Advertising	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	advertising	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	advertising	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Advertising and Art History	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Africana studies and mathematics	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Anthropology	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Art	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Athletic Training	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Biorobotics	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Biochemistry	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Biology	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Biology	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Biomedical Engineering	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Biomedical Engineering	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Biomedical Engineering	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Business Administration	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Economics	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	English	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	English	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Exercise Physiology	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Finance	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Finance	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Finance	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Finance/Accounting	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Health Science	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Health Science	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	TEN	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	International Finance and Marketing	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	International studies	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Management	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	MARINE AFFAIRS	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	MARINE SCIENCE	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	MARKETING	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Marketing	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Marketing	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	mathematics	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Microbiology & Immunology	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Modern Languages and International Stud	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Nurse Engineering	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Neuroscience	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Neuroscience	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Neuroscience/Mathematics	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Nursing	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Psychology	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Psychology	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	psychology/criminology	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	public relations	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	Public Relations and International Studie	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Theatre	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Female	undecared	Yes, maybe, depends on my other course requirements
Yes	Sophomore	Male	Accounting	Yes, but could not fit it in at this point
Yes	Sophomore	Male	Accounting	Yes, but could not fit it in at this point
Yes	Sophomore	Male	Accounting	Yes, but could not fit it in at this point

Yes	Sophomore	Female	Accounting	Yes, but could not fit in at this point
Yes	Sophomore	Female	Accounting	Yes, but could not fit in at this point
Yes	Sophomore	Male	accounting	Yes, but could not fit in at this point
Yes	Sophomore	Female	advertising/political science	Yes, but could not fit in at this point
Yes	Sophomore	Male	Biology	Yes, but could not fit in at this point
Yes	Sophomore	Female	Biology	Yes, but could not fit in at this point
Yes	Sophomore	Female	Biomedical Engineering	Yes, but could not fit in at this point
Yes	Sophomore	Female	Broadcast Journalism	Yes, but could not fit in at this point
Yes	Sophomore	Male	Chemistry / Ecosystem Science and Policy	Yes, but could not fit in at this point
Yes	Sophomore	Male	ECONOMICS	Yes, but could not fit in at this point
Yes	Sophomore	Female	Exercise Physiology	Yes, but could not fit in at this point
Yes	Sophomore	Female	Health Sector Management	Yes, but could not fit in at this point
Yes	Sophomore	Female	History	Yes, but could not fit in at this point
Yes	Sophomore	Female	Human and Social Development and Psychology	Yes, but could not fit in at this point
Yes	Sophomore	Female	Industrial Engineering	Yes, but could not fit in at this point
Yes	Sophomore	Female	International studies	Yes, but could not fit in at this point
Yes	Sophomore	Female	international studies/exercise phys	Yes, but could not fit in at this point
Yes	Sophomore	Female	journalism	Yes, but could not fit in at this point
Yes	Sophomore	Female	marine science and bio	Yes, but could not fit in at this point
Yes	Sophomore	Male	Microbiology	Yes, but could not fit in at this point
Yes	Sophomore	Male	Microbiology & Immunology	Yes, but could not fit in at this point
Yes	Sophomore	Female	Microbiology & Immunology	Yes, but could not fit in at this point
Yes	Sophomore	Female	Music Engineering	Yes, but could not fit in at this point
Yes	Sophomore	Female	Neuroscience	Yes, but could not fit in at this point
Yes	Sophomore	Female	Neuroscience	Yes, but could not fit in at this point
Yes	Sophomore	Female	Neuroscience	Yes, but could not fit in at this point
Yes	Sophomore	Female	Neuroscience	Yes, but could not fit in at this point
Yes	Sophomore	Female	Psychology	Yes, but could not fit in at this point
Yes	Sophomore	Female	Psychology	Yes, but could not fit in at this point
Yes	Sophomore	Female	public relations	Yes, but could not fit in at this point
Yes	Sophomore	Male	and studies	No, holds no interest
Yes	Sophomore	Male	Marketing	No, holds no interest
Yes	Sophomore	Female	physical therapy	No, holds no interest
Yes	Junior	Female	Biology	Yes, definitely
Yes	Junior	Female	Biology	Yes, definitely
Yes	Junior	Male	Biology and Psychology	Yes, definitely
Yes	Junior	Female	Biology/Environmental Science	Yes, definitely
Yes	Junior	Male	Biomedical Engineering	Yes, definitely
Yes	Junior	Female	Business	Yes, definitely
Yes	Junior	Female	Creative Advertising	Yes, definitely
Yes	Junior	Female	Criminology	Yes, definitely
Yes	Junior	Female	econ	Yes, definitely
Yes	Junior	Male	economics	Yes, definitely
Yes	Junior	Female	ecosystems science and policy/ marine a	Yes, definitely
Yes	Junior	Female	ECS/ECO	Yes, definitely
Yes	Junior	Female	engineering	Yes, definitely
Yes	Junior	Female	Exercise Physiology	Yes, definitely
Yes	Junior	Female	film/visual journalism	Yes, definitely
Yes	Junior	Female	Finance 7 Economics	Yes, definitely
Yes	Junior	Male	Finance 8BA	Yes, definitely
Yes	Junior	Female	Geology	Yes, definitely
Yes	Junior	Female	Health science	Yes, definitely
Yes	Junior	Female	International Finance and Marketing	Yes, definitely
Yes	Junior	Female	International studies	Yes, definitely
Yes	Junior	Female	International Studies, Psychology	Yes, definitely
Yes	Junior	Female	Journalism	Yes, definitely
Yes	Junior	Female	Marine Affairs and International Studies	Yes, definitely
Yes	Junior	Female	marine science and bio	Yes, definitely
Yes	Junior	Female	Marine Science/Biology	Yes, definitely
Yes	Junior	Female	Marketing	Yes, definitely
Yes	Junior	Male	Math	Yes, definitely
Yes	Junior	Female	mathematics	Yes, definitely
Yes	Junior	Female	MIC 1M1	Yes, definitely
Yes	Junior	Female	Microbiology & Immunology	Yes, definitely
Yes	Junior	Male	NEUB	Yes, definitely
Yes	Junior	Male	Nursing	Yes, definitely
Yes	Junior	Female	nursing	Yes, definitely
Yes	Junior	Male	Nursing	Yes, definitely
Yes	Junior	Female	nutrition	Yes, definitely
Yes	Junior	Female	Philosophy and American Studies	Yes, definitely
Yes	Junior	Female	Phys & Eng Int	Yes, definitely
Yes	Junior	Male	psychology	Yes, definitely
Yes	Junior	Male	Psychology	Yes, definitely
Yes	Junior	Female	psychology	Yes, definitely
Yes	Junior	Male	Psychology	Yes, definitely
Yes	Junior	Male	Public Relations	Yes, definitely
Yes	Junior	Female	public relations	Yes, definitely
Yes	Junior	Male	sports administration	Yes, definitely
Yes	Junior	Female	Advertising	Yes, maybe, depends on my other course requirements
Yes	Junior	Male	Advertising	Yes, maybe, depends on my other course requirements
Yes	Junior	Female	advertising	Yes, maybe, depends on my other course requirements
Yes	Junior	Female	biology	Yes, maybe, depends on my other course requirements
Yes	Junior	Male	biology	Yes, maybe, depends on my other course requirements
Yes	Junior	Female	biology	Yes, maybe, depends on my other course requirements
Yes	Junior	Female	Biology	Yes, maybe, depends on my other course requirements
Yes	Junior	Female	biology	Yes, maybe, depends on my other course requirements
Yes	Junior	Female	biomedical engineering	Yes, maybe, depends on my other course requirements
Yes	Junior	Male	Biomedical Engineering	Yes, maybe, depends on my other course requirements
Yes	Junior	Female	Broadcast Journalism	Yes, maybe, depends on my other course requirements
Yes	Junior	Female	Business	Yes, maybe, depends on my other course requirements
Yes	Junior	Female	criminology and psychology	Yes, maybe, depends on my other course requirements
Yes	Junior	Male	Economics	Yes, maybe, depends on my other course requirements
Yes	Junior	Female	Economics	Yes, maybe, depends on my other course requirements
Yes	Junior	Male	Economics	Yes, maybe, depends on my other course requirements
Yes	Junior	Male	Exercise Physiology	Yes, maybe, depends on my other course requirements

Yes	Junior	Male	Exercise Physiology	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Exercise Physiology	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Exercise Physiology	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Finance	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Finance	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Finance	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Finance and computer science	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Finance and Management	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Finance and Marketing	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Health science	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Journalism	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Marine affairs	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Marketing and Business Law	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Marketing and Finance	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	mechanical engineering	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Microbiology	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	microbiology	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Microbiology and Immunology	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	music/computer science	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Neuroscience	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Neuroscience	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Political Science and Economics	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Psychology	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Sport Administration	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Visual Journalism	Yes, maybe; depends on my other course requirements
Yes	Junior	Female	Visual Journalism and English Lit	Yes, maybe; depends on my other course requirements
Yes	Junior	Male	Aerospace Engineering	Yes, but could not fit it in at this point
Yes	Junior	Male	Biology	Yes, but could not fit it in at this point
Yes	Junior	Male	Biology and Psychology	Yes, but could not fit it in at this point
Yes	Junior	Male	Biomedical Engineering	Yes, but could not fit it in at this point
Yes	Junior	Female	Broadcast Journalism	Yes, but could not fit it in at this point
Yes	Junior	Male	BSL	Yes, but could not fit it in at this point
Yes	Junior	Male	Economics	Yes, but could not fit it in at this point
Yes	Junior	Female	FIN, MAS	Yes, but could not fit it in at this point
Yes	Junior	Male	Finance	Yes, but could not fit it in at this point
Yes	Junior	Male	Finance	Yes, but could not fit it in at this point
Yes	Junior	Female	Health science	Yes, but could not fit it in at this point
Yes	Junior	Female	Health sector management	Yes, but could not fit it in at this point
Yes	Junior	Male	International Finance and Marketing	Yes, but could not fit it in at this point
Yes	Junior	Male	Marketing	Yes, but could not fit it in at this point
Yes	Junior	Female	marketing and management	Yes, but could not fit it in at this point
Yes	Junior	Female	mathematics	Yes, but could not fit it in at this point
Yes	Junior	Male	mechanical Engineering	Yes, but could not fit it in at this point
Yes	Junior	Male	meteorology	Yes, but could not fit it in at this point
Yes	Junior	Female	Microbiology	Yes, but could not fit it in at this point
Yes	Junior	Female	Neuroscience	Yes, but could not fit it in at this point
Yes	Junior	Male	nursing	Yes, but could not fit it in at this point
Yes	Junior	Female	Political Science and Psychology	Yes, but could not fit it in at this point
Yes	Junior	Male	Political Science/International Studies	Yes, but could not fit it in at this point
Yes	Junior	Male	Psychology	Yes, but could not fit it in at this point
Yes	Junior	Male	Psychology	Yes, but could not fit it in at this point
Yes	Junior	Male	Psychology	Yes, but could not fit it in at this point
Yes	Junior	Female	Psychology	Yes, but could not fit it in at this point
Yes	Junior	Male	Public relations	Yes, but could not fit it in at this point
Yes	Junior	Male	Secondary education, political science	Yes, but could not fit it in at this point
Yes	Junior	Female	sports administration and spanish	Yes, but could not fit it in at this point
Yes	Junior	Female	Visual Journalism and English Lit	Yes, but could not fit it in at this point
Yes	Junior	Female	Accounting	No, holds no interest
Yes	Junior	Male	Biochemistry	No, holds no interest
Yes	Junior	Male	Economics	No, holds no interest
Yes	Junior	Female	IFM	No, holds no interest
Yes	Junior	Male	Management / Economics	No, holds no interest
Yes	Junior	Male	Management and Marketing	No, holds no interest
Yes	Senior	Male	Aerospace Engineering	Yes, definitely
Yes	Senior	Female	Architectural Engineering	Yes, definitely
Yes	Senior	Female	Architecture	Yes, definitely
Yes	Senior	Female	Biology	Yes, definitely
Yes	Senior	Female	Biotechnology	Yes, definitely
Yes	Senior	Female	Broadcast Journalism	Yes, definitely
Yes	Senior	Male	Economic / ECS	Yes, definitely
Yes	Senior	Male	economics	Yes, definitely
Yes	Senior	Male	Economics	Yes, definitely
Yes	Senior	Female	economics and art	Yes, definitely
Yes	Senior	Female	Economics and International Studies	Yes, definitely
Yes	Senior	Female	Ecosystem Science and Policy	Yes, definitely
Yes	Senior	Female	Ecosystem Science and Policy/ Biology	Yes, definitely
Yes	Senior	Female	Ecosystem Science and Policy/Anthropology	Yes, definitely
Yes	Senior	Female	English	Yes, definitely
Yes	Senior	Female	entrepreneurship and business law	Yes, definitely
Yes	Senior	Male	Exercise Physiology	Yes, definitely
Yes	Senior	Female	Health Sector Management	Yes, definitely
Yes	Senior	Female	human and social development	Yes, definitely
Yes	Senior	Male	IFA	Yes, definitely
Yes	Senior	Female	International Finance and Marketing	Yes, definitely
Yes	Senior	Male	Management	Yes, definitely
Yes	Senior	Male	Marine affairs	Yes, definitely
Yes	Senior	Female	marine science	Yes, definitely
Yes	Senior	Female	Marine Science/ Biology	Yes, definitely
Yes	Senior	Male	Marine Science/Biology	Yes, definitely
Yes	Senior	Male	Maths	Yes, definitely
Yes	Senior	Male	Mechanical Engineering	Yes, definitely
Yes	Senior	Female	Media Management	Yes, definitely
Yes	Senior	Female	music therapy	Yes, definitely
Yes	Senior	Male	Neurobiology and History	Yes, definitely
Yes	Senior	Female	Neuroscience	Yes, definitely

Yes	Senior	Female	nursing/ ecosystem science and policy	Yes, definitely
Yes	Senior	Female	political science and Biology	Yes, definitely
Yes	Senior	Female	Psychology	Yes, definitely
Yes	Senior	Male	Psychology	Yes, definitely
Yes	Senior	Male	sports administration	Yes, definitely
Yes	Senior	Male	Theatre	Yes, definitely
Yes	Senior	Male	Theatre, film, and marketing	Yes, definitely
Yes	Senior	Female	accounting	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	accounting & finance	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Biology	Yes, maybe; depends on my other course requirements
Yes	Senior	Male	Biology	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Broadcast Journalism	Yes, maybe; depends on my other course requirements
Yes	Senior	Male	Business Management	Yes, maybe; depends on my other course requirements
Yes	Senior	Male	Chemistry	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Chemistry and marine science	Yes, maybe; depends on my other course requirements
Yes	Senior	Male	Civil/Architectural Engineering	Yes, maybe; depends on my other course requirements
Yes	Senior	Male	Classics	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	communication	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	DNP	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	ECE computer engineering	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	ECE computer engineering	Yes, maybe; depends on my other course requirements
Yes	Senior	Male	Economics	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Electronic Media	Yes, maybe; depends on my other course requirements
Yes	Senior	Male	entrepreneurship	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	film	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Finance	Yes, maybe; depends on my other course requirements
Yes	Senior	Male	Finance	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Finance	Yes, maybe; depends on my other course requirements
Yes	Senior	Male	Finance, Economics	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Health Science	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Health Sector Management and Policy	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	History	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	international studies	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Marine science/biology	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Marketing	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Marketing	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Neuroscience	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Neuroscience	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	nursing	Yes, maybe; depends on my other course requirements
Yes	Senior	Male	Public Relations and International Studie	Yes, maybe; depends on my other course requirements
Yes	Senior	Female	Accounting	Yes, but could not fit it in at this point
Yes	Senior	Female	accounting	Yes, but could not fit it in at this point
Yes	Senior	Male	accounting	Yes, but could not fit it in at this point
Yes	Senior	Male	accounting	Yes, but could not fit it in at this point
Yes	Senior	Male	aerospace engineering	Yes, but could not fit it in at this point
Yes	Senior	Male	Aerospace Engineering/Mathematics	Yes, but could not fit it in at this point
Yes	Senior	Female	anthropology	Yes, but could not fit it in at this point
Yes	Senior	Male	Biology	Yes, but could not fit it in at this point
Yes	Senior	Female	Biology	Yes, but could not fit it in at this point
Yes	Senior	Male	Biomedical Engineering	Yes, but could not fit it in at this point
Yes	Senior	Female	bone	Yes, but could not fit it in at this point
Yes	Senior	Male	business law	Yes, but could not fit it in at this point
Yes	Senior	Male	Chemistry	Yes, but could not fit it in at this point
Yes	Senior	Male	ECE	Yes, but could not fit it in at this point
Yes	Senior	Male	Economics	Yes, but could not fit it in at this point
Yes	Senior	Female	Economics	Yes, but could not fit it in at this point
Yes	Senior	Female	education	Yes, but could not fit it in at this point
Yes	Senior	Male	engineering	Yes, but could not fit it in at this point
Yes	Senior	Male	engineering	Yes, but could not fit it in at this point
Yes	Senior	Female	Health Science and English Literature	Yes, but could not fit it in at this point
Yes	Senior	Female	International Relations	Yes, but could not fit it in at this point
Yes	Senior	Male	Kinesiology	Yes, but could not fit it in at this point
Yes	Senior	Male	Mgmt	Yes, but could not fit it in at this point
Yes	Senior	Male	Microbiology	Yes, but could not fit it in at this point
Yes	Senior	Female	Microbiology	Yes, but could not fit it in at this point
Yes	Senior	Female	Moon Pictures	Yes, but could not fit it in at this point
Yes	Senior	Female	music business	Yes, but could not fit it in at this point
Yes	Senior	Female	nursing	Yes, but could not fit it in at this point
Yes	Senior	Female	political science	Yes, but could not fit it in at this point
Yes	Senior	Female	psychology	Yes, but could not fit it in at this point
Yes	Senior	Female	psychology	Yes, but could not fit it in at this point
Yes	Senior	Female	Psychology	Yes, but could not fit it in at this point
Yes	Senior	Male	advertising	No, holds no interest
Yes	Senior	Female	biology	No, holds no interest
Yes	Senior	Male	econ	No, holds no interest
Yes	Senior	Male	exercise physiology	No, holds no interest
Yes	Senior	Male	Finance	No, holds no interest
Yes	Senior	Male	Finance	No, holds no interest
Yes	Senior	Female	Health science	No, holds no interest
Yes	Senior	Female	Health Science & Microbiology	No, holds no interest

Appendix 4: Global Sustainability: Living on a Finite Planet

Cognate: Global Sustainability: Living on a Finite Planet

Area of Knowledge: People and Society

Responsible Academic Unit: MSC Marine & Atmospheric Science

This cluster consists of three linked groups. Group one introduces human impacts on the natural world. Group two discusses environmental politics and policies. Group three considers societal implications of living on a finite planet. Recommended students: All students.

Complete exactly 3 of the following option groups:

Option Group: Human Impacts on Natural World

Complete exactly 1 course from the following:

ECS 111 Introduction to the Earth's Ecosystem

GSC 103 Evolution of the Modern Earth's Environment

MSC 220 Climate and Global Change

Option Group: Environmental Politics & Policy

Complete exactly 1 course from the following:

ECS 113 Introduction to Environmental Policy

ECS 372 Special Topics in Ecosystem Science and Policy

GEG 371 Environmental Geography: Current Issues

POL 322 Environmental Politics and Policy

MSC 340 Ocean Policy

MSC 313 Coastal Law

MSC 346 Climate Science and Policy

Option Group: Social Implications

Complete exactly 1 course from the following:

ARC 223 Architecture and the Environment

INS 322 Economics of Development and the Environment

INS 421 Poverty and the Environment

ECO 345 Environmental Economics

MSC 345 Economics of Natural Resources and the Environment

ECS 310 Sustainable Living

GEG 341 Geography of Population and Development

GEG 430 World Cities

Prerequisite Courses:

MSC 220 has a prerequisite of 3 CR in a natural science; Pre-req not enforced, and will be removed

GEG 371 has a prerequisite of 1 course in physical geography or ecology, or permission of instructor; the ecology requirement should be filled by most of the courses in option group 1

POL 322 has a prerequisite of POL 201 or 202; it is only offered in Summer

MSC 340 has a prerequisite of MSC 111
ARC 223 has a prerequisite of ARC 102 and ARC 122
INS 322 has a prerequisite of INS 102 or ECON 211 and 212, or permission of instructor
INS 421 has a prerequisite of INS 102 or permission of instructor
ECO 345 has a prerequisite of ECO 211 and ECO 302
MSC 345 has a prerequisite of ECO 211
GEG 341 has a prerequisite of and 100 level GEG course
GEG 430 has a prerequisite of any 100 level GEG course

Appendix 5: UM Sustainability Certificate course list

In addition to completing the “Global Sustainability” cognate, students must take at least 9 more credits to earn the sustainability certificate. Any courses within the “Global Sustainability” cognate not being used to satisfy the cognate may count for the certificate. Students may also choose courses from the list below. The list includes courses specific to various areas of study (e.g., engineering) that may require one or more prerequisites. (NOTE: Courses included in the cognate are not listed here.)

COLLEGE OF ARTS AND SCIENCES

Anthropology

APY307 Human Adaptation

3 credits Spring Semester

Human biological adaptation to different environments and stress is examined anthropologically within an evolutionary framework. Mechanisms of adaptation to temperature extremes and other climatic variables, high altitude, disease, nutritional stress, urbanization, extraterrestrial conditions, and other environmental challenges are described in relation to biological and behavioral variations among human populations. The limits of human performance and human adaptive potential in the present and future are explored. PREREQUISITE: SOPHOMORE STANDING AND ANY ONE OF THE FOLLOWING: APY 201, 202, 203; BIL 101, 109.

APY360 Anthropology of Food

3 credits Fall Semester

Evolution of human diet, basic nutrition, food taboos, effects of domestication, effects of diet on skeletal remains, analysis of your own food habits, and the impact of certain foods on the bio-cultural evolution of our species. PREREQUISITE: ANY 200 LEVEL ANTHROPOLOGY COURSE OR PERMISSION OF INSTRUCTOR

APY387 Cultural Evolution

3 credits Spring Semester

Evolution of social systems and technologies, from hunting and gathering bands through industrial states. PREREQUISITE: APY 202 AND THREE ADDITIONAL CREDITS IN ANTHROPOLOGY.

APY430 Anthropology of Sustainability

3 credits Fall Semester PREREQUISITE: APY 202 OR PERMISSION OF THE INSTRUCTOR

APY435 Anthropology of Nature and Environment

3 credits Spring Semester PREREQUISITE: APY 202 OR PERMISSION OF INSTRUCTOR

APY440 Environmental Archaeology

3 credits Offered By Announcement Only

Theory and methodologies in the reconstruction of Quaternary environments from the archaeological record. Techniques of geoarchaeology, zooarchaeology, and paleoethnobotany. PREREQUISITE: APY 201 AND THREE CREDITS IN BIOLOGY OR MARINE SCIENCE OR PERMISSION OF INSTRUCTOR.

Biology

BIL103 Introduction to Ecology

3 credits Fall & Spring Semester

Overview of ecological and evolutionary principles; Relationships of organisms to living and non-living aspects of their environment; human impact on ecosystems.

PREREQUISITE: NOT FOR CREDIT IN THE BIOLOGY MAJOR OR MINOR.

BIL220 Evolution and Disease

3 credits Fall & Spring Semester

Evolutionary insights on the origins and emergence of diseases, drug resistance, and how diseases have shaped human evolution. PREREQUISITE: ONE YEAR OF MAJORS' GENERAL BIOLOGY WITH LABORATORY

BIL232 Populations, Resources and the Environment

3 credits Offered By Announcement Only

Populations and their interrelationships with the environment. Human demographics, and natural resource issues including compatible development and landscape changes.

PREREQUISITE: ONE YEAR OF GENERAL BIOLOGY WITH LABORATORY.

BIL236 Ecology Lab

1 credit Fall & Spring Semester

Lab and field exercises in ecology. Some Saturday field trips required. PREREQUISITE: PREREQUISITE OR COREQUISITE: BIL 235.

BIL332 Ecology and Land Use in the Galapagos

3 credits Fall Semester

Principles and concepts of wildlife conservation and management. PREREQUISITE: BIL 250 OR PERMISSION OF INSTRUCTOR

BIL433 Conservation in Practice

3 credits Fall Semester PREREQUISITE: BIL 432 OR PERMISSION OF INSTRUCTOR

BIL539 Wildlife Resource Philosophy and Policy

3 credits Offered By Announcement Only

Attitudes, philosophy, and policies that govern management of wildlife resources worldwide. Methods to influence public support for implementation of sound wildlife resource management. PREREQUISITE: BIL 332.

Ecosystem Science and Policy

ECS202 Seminar Series in Contemporary Environmental Issues II

1 credit Spring Semester

Current environmental topics involving interaction of science and policy.

ECS301 Tools for Environmental Decision-Making: The Quantitative Perspective

3 credits Fall Semester

Quantitative decision-making techniques and methodologies. PREREQUISITE: ECS 111, 112.

ECS302 Perspectives on Environmental Decision Making

3 credits Fall & Spring Semester

Analytical techniques to assess human impacts on the environment. Team-taught by faculty

from law, ethics, anthropology and economics with experience in local, regional and global environmental management issues. PREREQUISITE: JUNIOR STANDING OR PERMISSION OF THE INSTRUCTOR

ECS433 Conservation in Practice

3 credits Fall Semester PREREQUISITE: BIL 432/ ECS 432 OR PERMISSION OF INSTRUCTOR

ECS501 Interdisciplinary Environmental Theory

3 credits Fall Semester

Theoretical approaches in environmental and social science fields, including conservation biology, ecology, geography, economics, sociology, anthropology, philosophy, and interdisciplinary approaches. Themes include human ecology, historical ecology, landscape ecology, environmental law and ethics, perception of risk and uncertainty, vulnerability and adaptation, and environmental valuation. PREREQUISITE: SENIOR OR GRADUATE STANDING IN ECS

Geography

GEG370 Conservation of Resources

3 credits Offered By Announcement Only

Problems of resource availability in an urban-industrial society. PREREQUISITE: ANY 100 OR 200-LEVEL GEOGRAPHY COURSE.

GEG522 Urbanization in the Developing World

3 credits Spring Semester

Patterns and processes in large cities in the developing world are examined.

PREREQUISITE: ANY 100 OR 200 LEVEL COURSE IN GEOGRAPHY OF PERMISSION FROM INSTRUCTOR.

GEG530 Resources and Society

3 credits Offered By Announcement Only

This course examines the relations between human society and material nature from within a broad theoretical perspective, relating questions of science, culture, and technology to the politics and economics of natural resources, focusing particularly on water, food, and petroleum. PREREQUISITE: 300-LEVEL COURSE IN HUMAN GEOGRAPHY OR PERMISSION OF INSTRUCTOR.

Geological Sciences

GSC105 The Global Environment

3 credits Fall Semester

Ongoing problems in earth systems: global warming, ozone depletion, energy shortages, air and water pollution, radioactivity.

GSC106 Geological Influences on Society

3 credits Spring Semester

Impact of geological processes on daily human activities and decision-making. Geological hazards and human habitation. Economic geology and exploration of natural resources. Influences of geology on other disciplines.

GSC107 Natural Disasters - Hollywood Vs. Reality

3 credits Spring Semester

This course will explore the causes, effects and societal responses to disasters. We will look at a variety of natural hazards and related disasters including flooding, volcanoes,

landslides, earthquakes, hurricanes, tsunami and drought. Using excerpted segments of "disaster films" in conjunction with scientific treatments, we can identify the causes, frequency, consequences, risks, and public perceptions of natural hazards.

GSC515 Applied Environmental Geology

3 credits Spring Semester

An advanced undergraduate/graduate course providing knowledge and methods for effective environmental site surveys, to be presented in a weekly 3-hour lecture and discussion. The course will cover policies and regulation including applied practice to comply with safe environmental conduct and valid assessment. Case study, best management practice, and appropriate field equipment and approaches will complement two one-day field trips associated with this course. PREREQUISITE: PERMISSION OF INSTRUCTOR OR DEPARTMENT CHAIR.

History

HIS229 Consumer Society: A Global History

3 credits Spring Semester

HIS368 Nature and the Environment in American History

3 credits Offered By Announcement Only

Shifting attitudes toward nature and the environment in American history; the rise of environmentalism and changes in public policy related to environmental conservation and preservation.

International Studies

INS101 Global Perspectives

3 credits Fall & Spring Semester

Introduces students to the study of international relations focusing on the continuing threat of national and ethnic conflict; terrorism; environmental and health concerns; globalization; economic interdependence, and poverty. Students are provided an overview of the evolution of international affairs in the modern era and are introduced to the various scholarly approaches for an understanding of international affairs.

INS102 Global Economics

3 credits Fall & Spring Semester

The international economy. This course develops the analytical tools underlying "the economic way of thinking" and applies them to two main topics: the environment and international trade.

INS201 Globalization and Change in World Politics

3 credits Fall & Spring Semester

The academic and public policy debates regarding the multiple impacts of the globalization of the world economy on the politics of nation-states and on the dynamics of the international system itself.

Latin-American Studies

LAS320 Special Topics in Latin American and Caribbean Environment

3 credits Offered By Announcement Only

Topics vary. Interdisciplinary focus on policies and impact on globalization on the environment.

LAS321 Latin American Environmental Issues
3 credits Fall Semester PREREQUISITE: LAS 101 OR PERMISSION OF INSTRUCTOR

LAS520 Interdisciplinary Topics in Latin American and Caribbean Environments
3 credits Fall & Spring Semester
Topics vary. Interdisciplinary focus on policies and impact of globalization on the environment. PREREQUISITE: LAS 101 AND SENIOR STATUS

LAS521 Latin American Environmental Issues
3 credits Fall Semester PREREQUISITE: LAS 101 AND SENIOR STATUS, OR LAS 501, OR PERMISSION OF INSTRUCTOR

Political Science

POL323 Global Warming, Politics and the European Union
6 credits First & Second Summer Session
The European Union (EU) and especially France to ecologically modernize their advanced economies. The course will treat the EU effort to fashion an international agreement on climate change. This class is conducted in Paris, France. PREREQUISITE: THREE (3) CREDITS IN THE SOCIAL SCIENCES.

POL370 Global Energy Politics
3 credits Offered By Announcement Only PREREQUISITE: POL 201 OR 203

POL531 Global Environmental Politics
3 credits Offered By Announcement Only
Examination of the environment within the context of economic globalization. Contrasts the international trading regime and those regimes designed to protect the environment, with specific attention to the issues of global warming and biodiversity. PREREQUISITE: POL 203

POL545 Environmental Policymaking
3 credits Spring Semester
Examination of different ethical approaches to the environment; the federal government's management of natural resources; selected environmental policies; international environmental policy issues. Topics include federal management of national grazing lands, national forests, and minerals in the public domain. Analyzes environmental policies such as air, water, toxic wastes, energy, and environmentally related issues in international trade and national security. PREREQUISITE: POL 201 OR POL 203

Sociology

SOC341 Social and Cultural Change
3 credits Offered By Announcement Only
Survey of major theories of change; analysis of the processes and mechanisms of change. Contemporary transitions in the underdeveloped regions of the world. PREREQUISITE: SOC 101.

SCHOOL OF BUSINESS

Economics

ECO545 Natural Resources Economics II
3 credits Offered By Announcement Only
This course surveys the economics of natural resource use, and is targeted to upper-division undergraduate and graduate students in economics. Topics include the economics of

pollution control, the application of cost/benefit analysis to the marine environment, the economics of non-renewable and renewable resource extraction, and international environmental problems. PREREQUISITE: ECO 345 or MAF 502.

COLLEGE OF ENGINEERING

Civil and Architectural Engineering

CAE240 Environmental Pollution

3 credits Spring Semester

Exploration of contemporary environmental issues. Introduction to engineering approaches for protecting and cleaning up the environment, techniques for assessing the impact of human activity on the environment, strategies for pollution control and implementation of environmental mitigation measures. PREREQUISITE: SOPHOMORE STANDING.

CAE340 Introduction to Environmental Engineering

3 credits Fall & Spring Semester

Environmental mass and energy balances, introduction to environmental chemistry, air pollution, water pollution, sustainable solid waste management, risk assessment, and global atmospheric change are discussed. PREREQUISITE: MTH 112, CHM 111 OR 151 OR PERMISSION OF INSTRUCTOR.

CAE430 Water-Resources Engineering I

3 credits Spring Semester

Basic principles of open channel flow. Computation of water surface profiles. Design of hydraulic structures, design of lined and unlined open channels, and design of sanitary sewer systems. Introduction to hydrology and analysis of hydrologic data. Rainfall characteristics and peak runoff models. PREREQUISITE: CAE 330

CAE530 Water Resources Engineering II

3 credits Fall Semester

Water quality regulations, fate and transport processes, water-quality control in rivers, lakes, wetlands, oceans, and ground water are discussed. PREREQUISITE: CAE 430

CAE560 Sustainable Construction

3 credits Offered By Announcement Only

Drivers and foundations of sustainable construction. Principles of sustainable construction: integrated planning and design life-cycle view of projects, resource selection and optimization, protection of the natural environment, toxics and pollutants elimination, durability and quality. Green building assessment initiatives, green building policies, and code impacts. Evaluation of the environmental impacts of construction operations. Innovative design and construction practices. Economic viability. Subtropical and coastal issue and opportunities. Case studies. PREREQUISITE: SENIOR STANDING IN ARCHITECTURE OR ENGINEERING AND PERMISSION OF INSTRUCTOR

CAE581 Energy-Efficient Building Design

3 credits Offered By Announcement Only

Concepts and methods of energy-efficient and environmentally friendly building design. Topics include energy and sustainable design strategies, climate, passive and active solar design, passive cooling systems, day lighting, and computer simulation of energy flows in buildings. A quantitative understanding of energy fundamentals, examples from practice, and design exercises using computer simulation programs are emphasized. PREREQUISITE: MAE 303 OR PERMISSION OF INSTRUCTOR.

Mechanical Engineering

MAE119 Energy and Environment

3 credits Fall Semester

Conventional energy systems; environmental problems caused by energy carriers and energy consumption; the greenhouse effect, acid rain, and pollution; need for cleaner energy sources; environmental and other characteristics of unconventional energy sources; synthetic energy carriers and their environmental characteristics; possible solutions to energy available and related environmental problems; solar-hydrogen energy system.

PREREQUISITE: FRESHMAN STANDING.

MAE510 Fundamentals of Solar Energy Utilization

3 credits Spring Semester

Fundamentals basic to the design and performance analysis of thermal systems for the capture and utilization of Solar Energy. PREREQUISITE: MAE 303, MTH 211 AND PHY 207.

MAE520 Air Pollution

3 credits Spring Semester

Course topics include fundamentals of air pollution, air quality, properties of air pollutants, effect of pollutants on the environment, analysis and modeling, diffusion of pollutants, and air pollution control. PREREQUISITE: MAE 303, 309/CAE 330 OR PERMISSION OF INSTRUCTOR.

MAE540 Energy Conversion

3 credits Spring Semester

Course topics include energy conversion, utilization, present and projected consumption of energy, thermodynamic principles, nuclear energy, fission and fusion reactions, hydroelectric power, and solar energy. Alternative energy sources, the hydrogen economy, and the energy-environment-economy system are also discussed. PREREQUISITE: SENIOR STANDING IN MECHANICAL AND AEROSPACE ENGINEERING OR PERMISSION OF INSTRUCTOR.

ROSENSTEIL SCHOOL OF MARINE AND ATMOSPHERIC SCIENCE

Applied Marine Physics

AMP590 Sustainable Fisheries - Assessment and Conservation

3 credits Spring Semester

This is the second of a three course series. This course will focus on advanced stock assessment techniques using acoustics and optics. It will cover, for example: - History of sampling fish stocks - "from catching to measuring fish" - Measuring with underwater sound and light - Sounds and echoes in marine ecosystem - Survey of fish stocks and their habitat. PREREQUISITE: MSC 471, OR EQUIVALENT.

Marine Affairs

MAF501 Political Ecology of Marine Management

3 credits Spring Semester

Course provides grounding in political ecology as an important theoretical approach to resource policy and management. The social analysis of resource use, social change, and development are discussed. Models of development and concepts of nature related to resource use and policy formation is also included. Within this framework, ethnicity, class, and the politics of conservation are explored. PREREQUISITE: MAF 505.

MAF510 Environmental Planning and the Environmental Impact Statement
3 credits Spring Semester

Course takes a broad view of environmental planning and analysis while focusing specifically on the preparation of environmental impact statements. Statutory requirements and procedures at the federal level are examined. Judicial opinions are studied that reflect environmental disputes and controversies. The course also considers some of the substantive requirements of environmental impact analyses.

MAF518 Coastal Zone Management
3 credits Fall Semester

Development of a framework for formulation and assessment of coastal zone policy. Analysis of issues and conflicts in coastal zone management (CZM), such as: zoning and planning, coastal and beach protection, ecosystem protection, the federal flood insurance program, adaptations to sea level rise, coastal pollution from land-based sources, and tourism impacts.

MAF520 Environmental Law
3 credits Fall Semester

An introductory course focusing on environmental problems. The study of Regulatory legislation, common law, and administrative law. Topics include toxic substances, air and water pollution, and habitat and species protection. PREREQUISITE: PERMISSION OF INSTRUCTOR.

Marine Biology and Fisheries

MBF575 Current Applications of Ecological Theory
3 credits Offered By Announcement Only

Course examines current applications of ecological theory. Topics include issues of stress ecology, methodologies for evaluating stress responses, methodologies for ecological risk assessment, general systems theory, and human/environmental interactions. Lecture, 3 hours. PREREQUISITE: PERMISSION OF THE INSTRUCTOR.

Marine Geology and Geophysics

MGG533 Environmental Geology
3 credits Offered By Announcement Only

Seminar and field study. Application of geologic principles to the solution of critical environmental problems. Effects of modification of wetlands, coastal zones, shelf environments, contrast of subtropical and temperate environmental response, and differentiation of short term and persistent effects.

Marine Science

MSC118 Current Weather Topics
1 credit Spring Semester

Weather and Climate-related phenomena such as hurricanes, severe storms, global warming, and acid rain. (Notes and analysis materials provided)

MSC300 Water Resources: History, Management, and Policy
3 credits First & Second Summer Session

This course is intended to develop an overview of the issues and problems surrounding the management of aquatic resources in the broadest sense including water quality of natural waters, drinking water, water pollution, water quantity and supply issues, watershed management, wetland protection, and coastal management. We will explore the available

strategies to wisely manage the various aquatic resources, policy options and their socio-economic aspects, legal frameworks, and institutional arrangements. The examples and cases discussed in the course will largely come from China, Vietnam, and the US.

MSC400 Water Quality Assessment and Environmental Forensics

3 credits First & Second Summer Session

This course is intended to provide the scientific basis for understanding water quality issues and how water pollution can adversely affect the health of humans and ecosystems.

Following basic introduction to the scientific concepts we will investigate numerous case studies using a forensic approach to unravel the mystery surrounding "how, why, and who" was responsible for specific water pollution cases that caused adverse human and/or ecological health effects. The course will have a capstone research project that will involve both laboratory and field investigations into a specific pollution problem.

MSC410 Marine Conservation Science

3 credits Offered By Announcement Only

Nature of marine biodiversity, what threatens it, and what can be done to recover the biological integrity of estuaries, coastal seas, and oceans. Topics include: distinctive aspects of marine populations and ecosystems; threats to marine biological diversity, singly and in combination; place-based management of marine ecosystems; and the human dimensions of marine conservation. **PREREQUISITE: MSC 230.**

RSMAS-General

RSM510 Environmental Ethics

3 credits Fall Semester

This course will introduce students to a variety of key issues and concepts in environmental ethics. The course will be a joint scientific and philosophic collaboration, exploring the ethical dimensions of controversial and emerging issues in biotechnology and the environment. After students are exposed to the scientific background of various actual case studies focusing on current environmental and social impact, the ethical and philosophical issues raised by the discussions will be explored using the tools and methods of analytic philosophy. The course will develop the student's ability to construct and evaluate philosophical arguments in the field of environmental ethics, and to reason philosophically on numerous questions in contemporary applied ethics. **PREREQUISITE: ALTHOUGH THERE ARE NO PHILOSOPHY PREREQUISITES FOR THIS COURSE, PERMISSION OF INSTRUCTOR IS REQUIRED.**

RSM520 Climate and Society

3 credits Spring Semester

This course is designed to provide students from different disciplinary backgrounds with an overview of physical processes, general concepts and policy debates surrounding climate issues.

RSM570 Carbon and Climate

3 credits Offered By Announcement Only

This course is designed to **provide students from different disciplinary backgrounds with an overview of the underlying processes, concepts, and policy debates surrounding the issue of carbon emissions and climate change. Individual faculty from RSMAS and elsewhere will lecture on cutting-edge research areas. Topics covered include: climate modeling and climate policy. **PREREQUISITE: GRADUATE OR SENIOR STANDING AT RSMAS, OR PERMISSION OF INSTRUCTOR.**

SCHOOL OF NURSING AND HEALTH STUDIES

Healthcare Sciences

HCS309 Health and Environment

3 credits Fall & Spring Semester

This course examines health issues, scientific understanding of causes and possible future approaches to control of the major environmental health problems. Topics include how the body reacts to environmental pollutants; physical, chemical, and biological agents of environmental contamination; vectors for dissemination; susceptible populations; the scientific bases for policy decisions and emerging global environmental health problems.

PREREQUISITE: HCS 206