Environmental Science Program : Change.
Program Proposal, Effective : 2012 : 07 : 18

University of South Florida St. Petersburg.

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For the Environmental Science track, students must take MAC 1147 Precalculus Algebra and Trigonometry, MAC 2311 Calculus I and MAC 2312 Calculus II. A requirement of MMC 4936 Scientific Writing, GIS 3006 Computer Cartography and GIS 4043 Geographic Information Systems have been added.

Impact on College and University Resources:
None anticipated. Math, GIS and writing courses are already taught by faculty and adjuncts.
Changes to the ESP degree for undergraduates at USFSP

**Justification:** The old catalog is vague about electives and does not establish a rigorous set of core courses. For years, the advising office has requested that we complete a list of electives and core courses to flesh out the ESP degree. This document represents culmination of our efforts to help advising and our students. All courses listed in the new catalog have been vetted.

**Summary of Changes:** Prerequisite courses have NOT been changed. Requirements for the two tracks have been established and are listed separately. Electives have been established and are listed for each track. New language and or courses added to the new catalog are in bold.  

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1 This proposal was approved by the APC on September 9, 2010 and the Dean on October 17, 2010 and then was forwarded to the UGC. For some reason this proposal didn't move forward from the UGC. Apparently a revision was requested by the UGC to the ESP Department. Dr. Cassill was leading this curricular change effort for the ESP Department. However, Dr. Cassill could not identify or produce any specific request from the UGC. Dr. Mike Lukkett, Chair of the UGC, was contacted by Dr. Dixon during the fall of 2011 to obtain the specific revision(s) requested. No specific revision requests were provided by Dr. Lukkett or identified from the UGC minutes provided by Dr. Lukkett. However, one of the UGC committee members, Dr. Smoak (2010-2011 cycle), who is also an ESP faculty member, noted incorrect course numbers in the proposal and the omission of a required lab section. The course numbers and the required lab section(s) have been corrected and added into this version of the proposal. Given the circumstances i.e., that no major revision requests from the UGC were found or contained in the document, the proposal is being forwarded to the UGC again on Nov 18, 2011. We need these changes instituted as soon as possible to make this program more rigorous and competitive.
OLD CATALOG COPY

- ENVIRONMENTAL SCIENCE AND POLICY (EVR)

The status of the earth’s environment has been a major concern since the 1960s. As we enter the 21st century, it represents one of the most critical issues facing nearly all nations individually as well as the earth community as a whole. Increased population, technology, globalization and diminishing natural resources all play an important role in the changing environment. As a consequence, governments at all levels are devoting resources to help understand the problems that we are facing and to aid in their mitigation. This includes everything from public education to cleaning up toxic waste sites.

The environmental industry is a growing arena for employment for degree holders at all levels. Students completing the Bachelor of Science (B.S.) in Environmental Science and Policy have found employment with government agencies (city, county, state, and federal), private industry, and non-profit organizations. Examples of careers include field scientist, research scientist, policy analyst, lobbyist, conservationist, and educator. Some also go on to attend graduate or law school.

The B.S. in Environmental Science and Policy was approved in 1995. This interdisciplinary program is housed in the College of Arts and Sciences. All students must complete the University’s General Education Requirements. All majors in the program must complete the required courses including two introductory courses in environmental science and policy, one semester of calculus, 2 semesters each of general biology and general chemistry, environmental ethics, environmental politics and policy, statistics and physical science (either geology or physics). In addition, majors take 6-7 courses that allow them to sub-specialize in science or in policy. Students choosing to sub-specialize in science take a second semester of calculus, 1 semester of organic chemistry and lab, and 4 electives within designated tracks. Students choosing to sub-specialize in policy take environmental law and environmental economics and 4 electives within designated categories. Finally, all majors must complete an upper division seminar and an internship or project. Unless stated otherwise, a grade of "C" is the minimum acceptable grade.

Requirements for the Major in Environmental Science and Policy

Recommended Prerequisites (State Mandated Common Prerequisites)

Students wishing to transfer to USF should complete the A.A. degree at the community college. Some courses required for the major may also meet General Education Requirements thereby transferring maximum hours to the university. If students transfer with fewer than 60 semester hours of acceptable credit, the students must meet the university's entering freshman requirements including ACT or SAT test scores, GPA, and course requirements. There are no State Mandated Common Prerequisites for this degree program.

The transfer student should also be aware of the immunization, foreign language, and continuous enrollment policies of the university.

Students are encouraged to complete the following required supporting major courses prior to entering the university. Unless stated otherwise, a grade of "C-" is the minimum acceptable grade.

- Biology I and II with Lab 8
- CHM 2045 & CHM 2045L General Chemistry I & Lab 4
- CHM 2046 & CHM 2046L General Chemistry II & Lab 4
- STA 2023 Introductory Statistics 4
- One approved Geology or Physics Course with Lab 4
- or
- MAC 2241 Life Sciences Calculus I 4
- or
- MAC 2281 Engineering Calculus I 4
- or
- MAC 2311 Calculus I 4

A second semester of calculus is only required of students pursuing the ESP-Science concentration. Students may choose among:

- MAC 2242 Life Sciences Calculus II 4
- or
- MAC 2282 Engineering Calculus II 4
- or
- MAC 2312 Calculus II 4

Students who are eligible for an internship must see the internship coordinator six weeks prior to the beginning of the semester in which they will complete the internship.

REQUIREMENTS FOR ALL ENVIRONMENTAL SCIENCE MAJORS
EVR 2001 Intro to Environmental Science
EVR 2001L Intro to Environmental Science Lab
EVR 2861 Intro to Environmental Policy
EVR 4821 ESP Seminar
BSC 2010 Biology I
BSC 2010L Biology Lab I
BSC 2011 Biology II
BSC 2011L Biology Lab II
MAC 2241 Life Sciences Calculus I
or
MAC 2281 Engineering Calculus I
or
MAC 2311 Calculus I
CHM 2045 General Chemistry I
CHM 2045L Chemistry Lab I
CHM 2046 General Chemistry II
CHM 2046L Chemistry Lab II
PUP 4203 Environmental Politics and Policy
PHI 3640 Environmental Ethics
EVR 4910 ESP Project
or
EVR 4940 ESP Internship

Statistics
STA 2023 Introductory Statistics I
or
QMB 2100 Business and Economic Statistics
or
EGN 3443 Engineering Statistics

Geology or Physics
GLY 2010 Dynamic Earth
GLY 2015L Essentials of Geology Lab
or
GLY 2100 Historical Geology
GLY 2015L Essentials of Geology Lab
or
PHY 2048 General Physics
PHY 2048L General Physics Lab
or
PHY 2053 General Physics
PHY 2053L General Physics Lab

Science Track
MAC 2242 OR MAC 2282 OR MAC 2312 and CHM 2210 and CHM 2210L plus 4 electives from the following tracks: Restoration, Water Quality, Environmental Monitoring or Marine Resources. Please contact the advising office for a current list of electives under these categories.

Policy Track
ECP 3302 and POS 3697
plus four approved policy-related electives.
Please contact the advising office for a current list of electives under this category.
November 18, 2010 modifications approved by ESPG faculty

OLD CATALOG COPY: Same as below except:

1. IN Environmental Policy Track (EP) prerequisites, added GLY2015L Essentials of Geology Lab. in EP electives, changed EVR 4930 title to 'special topics'

2. IN ES prerequisites, added GLY2010 Dynamic Earth (3) or GEO 2200 Intro to Physical Geography (3) for a total of 44 credit hours.

3. IN ES electives added:
   - EVR 4114 Climate change
   - EVR 4930 Selected Topics
   - MCB 3020C Microbiology
   - CHM 2210 Organic Chemistry I
   - CHM 2211 Organic Chemistry II
   - GLY3720C Fluid Earth I
   - OCE 4930 Special Topics
   - GIS 4300 Environmental Modeling with GIS

NEW CATALOG COPY

ENVIRONMENTAL SCIENCE AND POLICY (EVR)

The status of the earth’s environment has been a major concern since the 1960s. As we enter the 21st century, it represents one of the most critical issues facing nearly all nations individually as well as the earth community as a whole. Increased population, technology, globalization and diminishing natural resources all play an important role in the changing environment. As a consequence, governments at all levels are devoting resources to help understand the problems that we are facing and to aid in their mitigation. This includes everything from public education to cleaning up toxic waste sites.

The environmental industry is a growing arena for employment for degree holders at all levels. Students completing the Bachelor of Science (B.S.) in Environmental Science and Policy have found employment with government agencies (city, county, state, and federal), private industry, and nonprofit organizations. Examples of careers include field scientist, research scientist, policy analyst, lobbyist, conservationist, and educator. Some also go on to attend graduate or law school.

The B.S. in Environmental Science and Policy was approved in 1995. This interdisciplinary program is housed in the College of Arts and Sciences. All students must complete the University's General Education Requirements. All majors in the program must complete the required core courses and select among the elective courses from the lists below. Please note that the core and elective courses differ between the policy track and the science track. Finally, all majors must complete an upper division seminar and an internship or project. Unless stated otherwise, a grade of "C-" is the minimum acceptable grade.

Students wishing to transfer to USF should complete the A.A. degree at the community college. Some courses required for the major may also meet General Education Requirements thereby transferring maximum hours to the university. If students transfer with fewer than 60 semester hours of acceptable credit, the students must meet the university's entering freshman requirements including ACT or SAT test scores, GPA, and course requirements. There are no State Mandated Common Prerequisites for this degree program. The transfer student should also be aware of the immunization, foreign language, and continuous enrollment policies of the university. Transfer students are encouraged to complete the following required supporting major courses prior to entering the university. Unless stated otherwise, a grade of "C-" is the minimum acceptable grade.

ESP Policy Track—Total minimum required hours: (45)

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1. General education Prerequisites (24 not including math and science)

2. Environmental Policy Prerequisites (32)
   - BSC 2010 Biology I (3) and 2010L lab (1)
   - BSC 2011 Biology II (3) and 2011L lab (1)
   - CHM 2045 Chemistry I (3) and 2045L lab (1)
   - CHM 2046 Chemistry II (3) and 2046L lab (1)
   - PHY 2053 Physics I (3) and 2053L lab (1)
   - PHY 2054 Physics II (3) and 2054L lab (1)
   - MAC 2311 Calculus I (4)
       or MAC 2241 Life Sciences Calculus I (4) or MAC 2281 Engineering Calculus I (4)
   - STA 2023 Introductory Statistics I (4)

   or MAC 2312 Calculus II (4)
       or MAC 2242 Life Sciences Calculus II (4) or MAC 2282 Engineering Calculus II (4)
   - STA 2023 Introductory Statistics I (4)

3. Environmental Policy Core Requirements (40)
   - GLY 2010 Dynamic Earth (3) and 2000L (1)
   - OR GEO 2200 Intro to Physical Geography (3) and 2200L (1)
   - EVR 2861 Introduction to Environmental Policy (3)
   - EVR 2001 Introduction to Environmental Science and EVR 2001L Lab (4)
   - EVR 4865 Environmental Policy & Sustainability (3)
   - EVR 4921 Environmental Science and Policy Seminar (1)
   - EVR 4933 Field Methods (3)
   - EVR 4940 Environmental Policy Internship or EVR 4910 Project (3)
   - PUP 4203 Environmental Politics and Policy (3)
   - PHI 3640 Environmental Ethics (3)
   - POS 3697 Environmental Law (3)
   - GIS 3006 Computer Cartography (4)
   - ECO 2023 Economic Principles (Micro) PR (3)
   - ECO 2024 Macro Economics (3)

4. Environmental Policy Electives (6)
   - BSC 4057 Environmental Issues (3)
   - PCB 5307 Limnology (3) and 5307L (1)
   - EVR 4930 Selected Topics (3)
   - EVR 4027 Wetland Ecology (3)
   - GEO 4340 Natural Hazards (4)
   - GEO 4372 Global Conservation (4)
   - GEO 4284 Water Resources management (4)
   - ECP 3302 Environmental Economics (3)
   - GEO 3352 The Human Footprint on the Landscape (4)
   - GIS 4043 Geographic Information Systems (4)
   - GIS 4035 Remote sensing of the Environment (4)
   - MMC 4936 Scientific Writing (3)

ESP Science Track—Total minimum required hours: (45)

1. General education Prerequisites (24 not including math and science)

2. Environmental Science Prerequisites (40)
   - BSC 2010 Biology I (3) and 2010L lab (1)
   - BSC 2011 Biology II (3) and 2011L lab (1)
   - CHM 2045 Chemistry I (3) and 2045L lab (1)
   - CHM 2046 Chemistry II (3) and 2046L lab (1)
   - PHY 2053 Physics I (3) and 2053L lab (1)
   - PHY 2054 Physics II (3) and 2054L lab (1)
   - MAC 1147 Precalculus Algebra and Trigonometry (4)
   - MAC 2311 Calculus I (4)
       or MAC 2241 Life Sciences Calculus I (4) or MAC 2281 Engineering Calculus I (4)
   - MAC 2312 Calculus II (4)
       or MAC 2242 Life Sciences Calculus II (4) or MAC 2282 Engineering Calculus II (4)
   - STA 2023 Introductory Statistics I (4)
3. **Environmental Science Core Requirements (40)**
   - GLY2010 Dynamic Earth (3) and 2000 L (1)
   - or GEO 2200 Intro to Physical Geography (3) and 2200L (1)
   - EVR 2861 Introduction to Environmental Policy (3)
   - EVR 2001 Introduction to Environmental Science and EVR 2001L Lab (4)
   - EVR 4933 Field Methods (3)
   - PHI 3640 Environmental Ethics (3)
   - CHM 3210 Analytical Chemistry I and CHM 3210L Lab (4)
   - PCB 3043 Principles of Ecology and PCB 3043L Lab (4)
   - PUP 4203 Environmental Politics and Policy (3)
   - GIS 3006 Computer Cartography (4)
   - GIS 4043 Geographic Information Systems (4)
   - EVR 4921 Environmental Science and Policy Seminar (1)
   - EVR 4940 Environmental Science Internship or EVR 4910 Project (3)

4. **Environmental Science Electives (6)**
   - BSC 4057 Environmental Issues (3)
   - PCB 5307 Limnology (3) and 5307L (1)
   - EVR 4930 International Environmental Policy (3)
   - EVR 4027 Wetland Ecology (3)
   - GEO 4340 Natural Hazards (4)
   - GEO 4372 Global Conservation (4)
   - GEO 4284 Water Resources management (4)
   - ECP 3302 Environmental Economics (3)
   - GEO 3352 The Human Footprint on the Landscape (4)
   - GIS 4035 Remote sensing of the Environment (4)
   - EVR 4114 Climate change (3)
   - EVR 4930 Selected Topics (3 - 4)
   - MCB 3020C Microbiology (3)
   - CHM 2210 Organic Chemistry I (3)
   - CHM 2211 Organic Chemistry II (3)
   - GLY3720C Fluid Earth I (3)
   - OCE 4930 Special Topics (3 – 4)
   - GIS 4300 Environmental Modeling with GIS
   - MMC 4936 Scientific Writing (3)
USF St. Petersburg
Department of ESPG
Chair: Henry Alegria (halegria@mail.usf.edu)

Four-Year Course Schedule for ENVIRONMENTAL POLICY Degree

1. General education Prerequisites (24 not including math and science)

2. Environmental Policy Prerequisites (32)
   - BSC 2010  Biology I (3) and 2010L lab (1)
   - BSC 2011  Biology II (3) and 2011L lab (1)
   - CHM 2045  Chemistry I (3) and 2045L lab (1)
   - CHM 2046  Chemistry II (3) and 2046L lab (1)
   - PHY 2053  Physics I (3) and 2053L lab (1)
   - PHY 2054  Physics II (3) and 2054L lab (1)
   - MAC 2311  Calculus I (4)
   - STA 2023  Introductory Statistics I (4)

3. Environmental Policy Core Requirements (40)
   - GLY2010  Dynamic Earth (3) and 2000 L (1)
   - or GEO 2200 Intro to Physical Geography (3) and 2200L (1)
   - EVR 2861  Introduction to Environmental Policy (3)
   - EVR 2001  Introduction to Environmental Science and EVR 2001L Lab (4)
   - EVR 4865 Environmental Policy & Sustainability (3)
   - EVR 4921  Environmental Science and Policy Seminar (1)
   - EVR 4933  Field Methods (3)
   - EVR 4940  Environmental Policy Internship or EVR 4910 Project (3)
   - PUP 4203  Environmental Politics and Policy (3)
   - PHI 3640  Environmental Ethics (3)
   - POS 3697  Environmental Law (3)
   - GIS 3006  Computer Cartography (4)
   - ECO 2023  Economic Principles (Micro) PR (3)
   - ECO 2024  Macro Economics (3)

4. Environmental Policy Electives (6)
   - BSC 4057  Environmental Issues (3)
   - PCB 5307  Limnology (3) and 5307L (1)
   - EVR 4930  International Environmental Policy (3)
   - EVR 4027  Wetland Ecology (3)
   - GEO 4340  Natural Hazards (3)
   - GEO 4372  Global Conservation (3)
   - GEO 4284  Water Resources management (3)

Source: Modified by Barnali
ECP 3302 Environmental Economics (3)
MMC 4936 Scientific Writing (3)
GEO 3352 The Human Footprint on the Landscape (3)
    GIS 4035 Remote sensing of the Environment (4)
### POSSIBLE COURSE ROTATION

#### Fall 1 (15)
- ENC 1101 Composition I 3
- BSC 2010 Biology I – Cellular Processes 3
- BSC 2010L Biology I – Cellular Processes Lab 1
- CHM 2045 General Chemistry I 3
- CHM 2045L General Chemistry I Lab 1
- MAC 1147 Precalculus Algebra and Trigonometry 4

#### Spring 1 (15)
- ENC 1102 Composition II 3
- BSC 2011 Biology II – Diversity 3
- BSC 2011L Biology II Diversity Lab 1
- CHM 2046 General Chemistry II 3
- CHM 2046L General Chemistry II Lab 1
- MAC 2311 Calculus I 4

#### Summer 1 (0)

#### Fall 2 (14)
- EVR 2861 Introduction to Environmental Policy 3
- PHY 2053 General Physics I 3
  - or GLY 2010 Dynamic Earth
- PHY 2053L General Physics I Laboratory 1
  - or GLY 2000L Dynamic Earth Laboratory
- ECO 2023 Economic Principles (Micro) PR 3
- EVR 2001 Introduction to Environmental Science 3
- EVR 2001L Environmental Science Lab 1

#### Spring 2 (16)
- XXX XXXX ALAMEA Elective 3
- STA 2023 Introductory Statistics I 4
- XXX XXXX Fine Arts Elective 3
- XXX XXXX Historical Perspectives Elective 3
- ECO 2024 Macro Economics 3

#### Summer 2 (3)
- EVR 4933 Field Methods 3

#### Fall 3 (15)
- PHI 3640 Environmental Ethics 3
- XXX XXXX ESP Policy Elective 3
- XXX XXXX ESP Policy Elective 3
- XXX XXXX Free Upper-Level Elective 3
- XXX XXXX Free Upper-Level Elective 3

Source: Modified by Barnali
### Spring 3 (13)
- PUP 4203 Environmental Politics and Policy 3
- GIS 3006 Computer Cartography 4
- POS 3697 Environmental Law (3) 3
- XXX XXXX Free Upper-Level Elective 3

### Summer 3 (3)
- EVR 4940 Environmental Policy Internship 3
  or EVR 4910 Environmental Science & Policy Project

### Fall 4 (15)
- EVR 4865 Environmental Policy & Sustainability 3
- XXX XXXX ESP Policy Elective 3
- MMC 4936 Scientific Writing 3
- XXX XXXX Free Upper-Level Elective 3
- XXX XXXX Exit - 6A L&W Elective 3

### Spring 4 (13)
- EVR 4921 Environmental Science and Policy Seminar 1
- XXX XXXX ESP Policy Elective 3
- XXX XXXX Free Upper-Level Elective 3
- XXX XXXX Free Upper-Level Elective 3
- XXX XXXX Exit - General MWMI Elective 3

**Total (120) including 48 hours of upper division courses**

Source: Modified by Barnali