Report of the University Curriculum Committee
January 9, 2004

Nonsubstantive Administrative Change Request
College of Agriculture and Life Sciences and
College of Geosciences
B.S. in Environmental Studies
Texas A&M University

Administrative Change Request
for the
B.S. Degree in Environmental Studies

December 2003
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Administrative Change Request

NAME OF INSTITUTION: Texas A&M University

CHANGE REQUEST

The B.S. degree in Environmental Studies that is located within the College of Geosciences was approved on June 11, 2002. This is a request to change the degree program to university level under Interdisciplinary Degree Programs. The purpose of the change is to allow students in the College of Geosciences and the College of Agriculture and Life Sciences to complete the degree. The letter of support from the Dean of the College of Geosciences is located in Appendix A.

Current Listing

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Proposed Listing

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PROPOSED DATE FOR IMPLEMENTATION OF CHANGE: Fall Semester 2004
CONTACT FOR FURTHER INFORMATION ABOUT ADMINISTRATIVE CHANGE:

Name: Dr. Edward A. Hiler
Title: Vice Chancellor and Dean for Agriculture
       College of Agriculture and Life Sciences
Phone: (979) 845-4747
FAX: (979) 862-1697

Name: Dr. Mary J. Richardson
Title: Interim Dean
       College of Geosciences
Phone: (979) 845-3651
FAX: (979) 845-0056

Name: Dr. Karen S. Kubena
Title: Associate Dean for Academic Affairs
Phone: (979) 845-3712
Fax: (979) 845-6083

Name: Dr. Vatche Tchakerian
Title: Associate Dean
Phone: (979) 845-3651
FAX: (979) 845-0056

SIGNATURES:

------------------------------------------
Campus Chief Executive Officer            Date
------------------------------------------

------------------------------------------
System Chief Executive Officer            Date
------------------------------------------

Governing Board approval date: ___________________________
1. Description of change requested.

This request is for a nonsubstantive change in the administrative status of the B.S. in Environmental Studies at Texas A&M University. This change consists of moving the degree program from the College of Geosciences to the status of a University-level, Interdisciplinary Program (see pages 1 and 2). Approval of this request will allow other Colleges to participate in offering the B.S. in Environmental Studies, as intended in the original Substantive Degree Program Request for the Environmental Studies curriculum submitted by the College of Geosciences in 2002. A Council of Participating Deans administers the B.S. in Environmental Studies. Technical courses that focus on earth system sciences in the College of Geosciences will be replaced by technical courses that focus on natural resources in the College of Agriculture and Life Sciences for those students who desire that orientation.

2. Rationale for change requested.

Concern for the impact of human activities on the environment has permeated every sector of society. Job expansion in the environmental marketplace proceeded rapidly in the past decade and is expected to increase steadily for the foreseeable future (Environmental Careers in the 21st Century, Island Press, 1999). Therefore, there are many opportunities for challenging careers in a variety of environmental areas. A great deal of critical research, which focused on the environment and natural resources, has been conducted at Texas A&M University. Faculty members involved in these projects are well positioned to educate students in their respective environmental disciplines. In response to the need for academic programs, several environmentally-related curricula have been developed at Texas A&M. In order to coordinate instruction in the environmental sciences, the Deans of the Colleges of Geosciences and Agriculture and Life Sciences devised a plan to capture existing strengths in teaching, research, and outreach within individual colleges and stimulate interdisciplinary programs among these academic units.

One important component of the program, first proposed by the College of Geosciences, is the Environmental Studies curriculum. This curriculum focuses on the earth sciences, but also emphasizes the human-dimension and policy aspects of natural resources and environmental issues. Following approval of this request, The College of Agriculture and Life Sciences will also be able to offer the B.S. in Environmental Studies. A proportion of the courses will be identical within the two curricula, particularly those from Liberal Arts and Geosciences. A large block of disciplinary courses will come from the student's specific field of study. This will allow for a specific orientation that will distinguish the professional interests of the student. Environmental Studies offered through the College of Agriculture and Life Sciences will allow students to benefit from the vast expertise of knowledgeable faculty working in the biological sciences, as compared to the physical sciences orientation in Geosciences. As envisioned during the planning stage of the Texas A&M Environmental Program, administration of the Environmental Studies major will be changed from the College of Geosciences to an Interdisciplinary program at the University level.
Four forces in society drive employment trends in the environmental sciences. These include (1) political agreement supporting legal and regulatory requirements, (2) economics and the marketplace, (3) environmental values, and (4) technology. The latter of these, technology, is well supported in existing curricula in COALS. The proposed curriculum is designed to address the first three forces, recognizing that the environmental field is largely based on the formulation of regulatory and policy issues designed to protect human health and the environment. The academic intent of this curriculum is to provide the student with a technical background and blend this with a solid foundation in economics, political issues, environmental law, ethics, and communications. The technical aspects of the curriculum will draw upon the many environmental disciplines in COALS, including courses dealing with basic biological sciences, natural resources, and measuring environmental parameters. It is the fusion of these courses with those from the Liberal Arts that make this a truly unique curriculum (Appendix B Degree Requirements and Appendix C Curriculum for the B.S. Degree in Environmental Studies).

3. Assessment of the effect of the change on the administrative units involved, and on the institution as a whole.

The technical background in natural resources will be interdisciplinary and will be provided through courses from several departments in the College of Agriculture and Life Sciences (COALS). A college-based curriculum, faculty, and advisors from initially eight departments will be involved in the curriculum. Participating departments will include Agricultural Economics; Entomology; Forest Science; Plant Pathology and Microbiology; Rangeland Ecology and Management; Recreation, Park and Tourism Sciences; Soil and Crop Sciences; and Wildlife and Fisheries Sciences. The Administrative Framework for Interdisciplinary Programs, which was developed by the Faculty Senate of Texas A&M University and approved by the President, will be the basis for the organizational structure of the Environmental Studies program (see Appendix D. A graphic representation of the administrative structure is presented in Appendix E.

- Council of Participating Deans - Deans from the College of Agriculture and Life Sciences and the College of Geosciences will form a Council of Participating Deans that collectively will serve in the role of the Dean.

- Program Council – The Council of Participating Deans, the Associate Provost for Undergraduate Programs, the Director of the Environmental Studies Program in the College of Geosciences who also serves as Associate Dean, the COALS Associate Dean for Academic Affairs who also serves in an oversight capacity for the Environmental Sciences Program in COALS, the Chair of the COALS Management Board, and up to five of the participating Department Heads will form a Program Council. The Program Council chaired by the chair of the Council of Participating Deans, will provide administrative oversight for the program.

- COALS Management Board - A Management Board with the goal of providing direction for the program has been formed with one representative from each of the eight participating COALS departments with the COALS Associate Dean for Academic Affairs, serving as convener until a chair is selected from among the departmental
representatives. Then the Associate Dean will be a member of the Management Board. Representatives from the participating departments are appointed by the head of the respective department. The COALS Management Board will implement policy developed by the Council of Participating Deans and the Program Council. The participating departments in COALS are:

Agricultural Economics  
Entomology  
Forest Science  
Plant Pathology and Microbiology  
Rangeland Ecology and Management  
Recreation, Park and Tourism Sciences  
Soil and Crop Sciences  
Wildlife and Fisheries Sciences

There are less than a half dozen curricula with the term Environmental in their titles within the TAMU system and perhaps a dozen at various institutions of higher education throughout the state. None of these are within Colleges of Agriculture, and most are more narrowly based on environmental management.

Due to the unique composition of the curriculum, the majority of interested students will come from areas outside of the realm of traditional, science-based, or technical backgrounds. This program provides a focus for students with a liberal arts orientation, such as those in the fields of communications, politics and social policy, or resource management to apply their interests to an area where technology transfer is needed. The curricula where such students currently reside could be very crowded. There will also be minimal impact on existing technical curricula. Letters of acknowledgement from Department Heads for the departments in the College of Liberal Arts are contained in Appendix F.

4. Implications for classes, distribution of personnel, availability of facilities, and availability of equipment.

Table 1. Anticipated enrollment and assumptions.

<table>
<thead>
<tr>
<th>Year of Program</th>
<th>New Students</th>
<th>Change of Curriculum</th>
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<td>Year 5</td>
<td>20</td>
<td>35</td>
<td>30</td>
<td>5</td>
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</table>

In Year 1, 8 students will change curriculum from the B.S. in Bioenvironmental Sciences in the Department of Plant Pathology and Microbiology to the University level Environmental Studies curriculum. Two new students will be enrolled as freshman or transfers in Year 1,
bringing the total to 10. In Year 2, 10 new freshmen or transfers will enroll, and 12 will change curriculum from the participating departments (participating departments are: Agricultural Economics; Entomology; Forest Science; Plant Pathology and Microbiology; Rangeland Ecology and Management; Recreation, Park and Tourism Sciences; Soil and Crop Sciences; and Wildlife and Fisheries Sciences) or other curricula within the University (e.g. General Studies). With 2 graduating in Year 2, then the total in the program will be 30 students. This trend is expected to continue until a peak of 80 to 100 students is achieved.

The course descriptions included in this curriculum are listed in Appendix G. This list includes those courses common to both Colleges as well as those unique to COALS (in boldface). The times when the courses are offered are in Appendix H. No new courses will be needed for the curriculum.

Appendix I contains the list of faculty involved in instructing the courses in the curriculum. The number of students projected to be in this curriculum is relatively small with respect to the large list of courses available for selection. The impact will therefore be minimal. As the curriculum becomes established and successful graduates and advisors encourage students to enroll in the major, faculty assignments for teaching courses may need to be shifted. Availability of faculty members who would be able to accept additional teaching assignments related to this curriculum is expected to increase over the next 5 years. More than 400 faculty members will be hired at Texas A&M University during this period under a university-wide program underway at the direction of the President.

Equipment needs for the proposed curriculum can be met with existing resources, all of which were obtained to fulfill the requirements of other curricula. There have been no expenditures made during the last three years for equipment and supplies specifically for the proposed program.

No alterations or renovations of existing facilities have been made during the last three years specifically for the proposed program. Appendix J consists of a letter of acknowledgement from Charles L. Gilreath, Associate Dean for Advanced Studies for the Texas A&M University Libraries, in which Dr. Gilreath affirms that library resources necessary for the curriculum are adequate.
Appendix A

Letter of Support from Dean
College of Geosciences
Appendix A

Letter of Support from Dean
College of Geosciences
December 22, 2003

The letter of support from the Interim Dean of the College of Geosciences will be submitted as soon as possible. Development of this proposal has been a collaborative effort between Dr. Vatche Tchakerian and Drs. Karen Kubena and Dave Appel.

Thank you.

Karen Kubena
Appendix B

Comparative Lists of Degree Requirements
for Colleges of Agriculture and Life Sciences
and College of Geoscience
### Environmental Studies Degree – College of Agriculture and Life Sciences
#### Degree Requirements

**Environmental Policy and Management (27 hours)**

*Required*

- AGEC 105 Introduction to Agricultural Economics\(^3\) (3)
- GEOG 204 Economic Geography (3)

*Select 21 hrs. from:*

- AGEC 350 Environmental & Nat. Resource Econ. (3)
- AGEC 344 Agricultural Law\(^4\) (3)
- AGEC 429 Agricultural Policy (3)
- ECON 202 Principles of Economics (3)
- ECON 203 Principles of Economics (3)
- ECON 323 Microeconomic Theory (3)
- ECON 412 Public Finance (3)
- ECON 435 Economics Resource Scarcity (3)
- FRSC 406 Forest Policy (3)
- GEOG 401 Political Geography (3)
- GEOG 406 Geog perspectives Urban Issues (3)
- PHIL 314 Environmental Ethics (3)
- PHIL 483 Professional Ethics (3)
- PLAN 365 Land Use Planning (3)
- PLAN 414 Sustainable Communities (3)
- POLS 306 Contemporary Political Problems & Issues (3)
- POLS 329 Comparative Politics (3)
- POLS 331 World Politics (3)
- POLS 340 Public Administration (3)
- POLS 342 Politics and Bureaucracy
- POLS 347 Politics of Energy and the Environment (3)
- POLS 440 Public Policymaking (3)
- POLS 461 Jurisprudence (3)
- SOCI 312 Population and Society (3)
- SOCI 328 Environmental Sociology (3)
- WFSC 303 Fish & Wildlife Laws and Administration (3)

**Math & Statistics (9 hrs)**

- MATH 141 Business Math I (3)
- MATH 142 Business Math II (3)
- STAT 303 Statistical Methods (3)

**Directed University Requirement (37 hrs)**

- BIOL 113/123 Intro Biology/Lab OR BOTN 101 (4)
- ENGL 104 Composition and Rhetoric (3)
- GEOG 201 Human Geography (directed – social science) (3)
- GEOG 203 Planet Earth- Intro to Earth System Science (3)
- HIST from (6):
  - HIST 359 American Environmental History (3)
  - HIST 360 History of the American Petroleum Industry (3)
  - HIST 363 History of Science in America (3)

### Environmental Studies Degree – College of Geosciences
#### Degree Requirements

**Environmental Policy and Management (27 hours)**

*Required*

- AGEC 105 Introduction to Agricultural Economics\(^3\) (3)
- GEOG 204 Economic Geography (3)

*Select 21 hrs. from:*

- AGEC 350 Environmental & Nat. Resource Economics (3)
- ECON 203 Principles of Economics (3)
- ECON 323 Microeconomic Theory (3)
- ECON 412 Public Finance (3)
- ECON 435 Economics Resource Scarcity (3)
- GEOG 406 Geog perspectives Urban Issues (3)
- PLAN 365 Land Use Planning (3)
- PLAN 414 Sustainable Communities (3)
- POLS 329 Comparative Politics (3)
- POLS 331 World Politics (3)
- POLS 340 Public Administration (3)
- POLS 342 Politics and Bureaucracy (3)
- POLS 347 Politics of Energy and the Environment (3)
- POLS 440 Public Policymaking (3)
- SOCI 312 Population and Society (3)
- SOCI 328 Environmental Sociology (3)

**Math & Statistics (9 hrs)**

- MATH 141 Business Math I (3)
- MATH 142 Business Math II (3)
- STAT 303 Statistical Methods (3)

**Directed University Requirement (43 hrs)**

- BIOL 113/123 Intro Biology/Lab OR BOTN 101 (4)
- ENGL 104 Composition and Rhetoric (3)
- GEOG 203 Planet Earth- Intro to Earth System Science (3)
- GEOG 335 Pattern and Process in Biogeography (3)
- GEOG 390 Principles of Geographic Inf. Systems (3)
- GEOG 332 Thematic Cartography (3), or
- GEOG 475 Advanced Topic in GIS (4), or
- GEOG 361 Remote Sensing in Geosciences (4)
Environmental Studies Degree – College of Agriculture and Life Sciences
Degree Requirements1 (continued)

HIST 364 History of Tech. and Eng. In America, 1607 – 2007 (3)
Political Science (6)
   POLS 206 American National Government (3)
POLS 207 State and Local Government (3)
Kinesiology (2) – KINE 198 (1) and KINE 199 (1)
Visual and Performing Arts (3)
Humanities (3)
   PHIL 205 Technology and Human Values (3) or
   PHIL 314 Environmental Ethics (3)

Free Electives (14 hrs)

Natural Resources Core (32 hrs)1

AGRO 301 Soil Science (4)
BESC 201 Intro. To Bioenvironmental Sciences (3)
CHEM 101 Fundamentals of Chemistry I (4)
FRSC 304 Forest Ecology (3)
Professional Experience elective (3)
RENR 205 Fundamentals of Ecology (3)
RENR 375 Conservation of Natural Resources (3)
RENR 405 GIS for Environmental Problem Solving (3) or
RENR 470 Environmental Impact Assessment (3) or
FRSC 461 Geographic Information Systems for Resource Management (3)
RPTS 420 Natural Resource Law (3)
WFSC 301 Wildlife and the Changing Environment (3)

Natural Resources Technical Courses (9 hrs)1

Select 9 hrs from:

AGSM 301 Systems Analysis in Agriculture (3)
AGSM 337 Technology for Env. and Natural Resource Engineering (3)
BESC 401 Bioenvironmental Microbiology (3)
BESC 403 Sampling and Environmental Monitoring (3)
ENTO 403 Urban Entomology (3)
ENTO 424 Insect Ecology (3)
FRSC 305 Silviculture (4)
FRSC 421 Urban Forestry (3)
POSC 427 Animal Waste Management (3)
RENR 375 Conservation of Natural Resources (3)
RENR 410 Ecosystem Management (3)
RENR 444 Remote Sensing in Ren Natural Resources (3)
RLEM 301 Range and Forest Watershed Management (3)
RLEM 320 Landscape Restoration (2)
RPTS 316 Recreational Management of Wildlands (3)
RPTS 426 Tourism Impacts (3)
RPTS 460 Dev. and Management of Protected Areas (3)
WFSC 201 Wildlife Conservation and Management (3)

Environmental Studies Degree – College of Geosciences
Degree Requirements1 (continued)

Communication Electives (3)
Political Science (6)
   POLS 206 American National Government (3)
POLS 207 State and Local Government (3)
HIST from (6):
   HIST 359 American Environmental History (3)
   HIST 360 History of the American Petroleum (3)
   HIST 363 History of Science in America (3)
   HIST 364 History of Tech. and Eng. In America (3)
Humanities (3)
   PHIL 205 Technology and Human Values (3) or
   PHIL 314 Environmental Ethics (3)
Visual and Performing Arts (3)
Kinesiology (2) – KINE 198 (1) and KINE 199 (1)

Free Electives (15-16 hrs)

Earth Sciences Courses (27 hrs)

GEOS 105 Introduction to Env. Geosciences (1)
GEOL 101 Principles of Geology (3)
OCNG 251 and 252 Oceanography (3) and Lab (1)
METR 201 and 202 Meteorology (3) and Lab (1)
GEOG 201 Intro. to Human Geography (3)
also as social & behavioral core requirement
GEOG 330 Resources and the Environment (3)
GEOL 420 Environmental Geology (3)
GEOG 405 Field Trips (1-4)

Geosciences Electives (6 hrs)

Select 6 hrs from:

GEOG, GEOL, GEOP, GEOS, METR, OCNG courses
Environmental Studies Degree – College of Agriculture and Life Sciences
Degree Requirements¹ (continued)

WFSC 403 Animal Ecology (3)
WFSC 405 Urban Wildlife and Fisheries (3)

¹The curriculum for the Environmental Studies Degree in the College of Agriculture and Life Sciences has an emphasis on natural resources in the 128 required hours and is consistent with the expectation that this proposed curriculum be developed similarly to that for the approved Environmental Studies Curriculum in the College of Geosciences.

²A selection of courses should be made from the Environmental Policy and Management category to reflect a broad background in policy and management.

²AGEC 105 is substituted for ECON 202 which is included in the previously approved (June 2002) Geosciences Environmental Studies Curriculum;

⁴Six hours of the University Core Science Requirement will be satisfied with courses in the Natural Resources Core, accounting for the 6 hour difference between the COALS and Geosciences programs.
Appendix C

Curriculum for the
B.S. Degree in Environmental Studies
College of Agriculture and Life Sciences
Curriculum in Environmental Studies

The B.S. degree in Environmental Studies in the College of Agriculture and Life Sciences combines natural resources oriented environmental courses with studies in public policy. This curriculum provides the student with a technical background and a social, political and economic perspective on complex environmental issues. The student may enroll in this curriculum through any participating department within COALS, depending on their specific interest in the environment. For further information concerning enrollment in the COALS Environmental Studies Program, contact the Dean's Office at (979) 845-3712, or any relevant Department in COALS.

FRESHMAN YEAR

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<th>First Semester</th>
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<tr>
<td>and BIOL 123 Introductory Biology Laboratory</td>
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<tr>
<td>or BOTN 101 Botany</td>
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</table>

| Total                                |         | 16 |

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Th-Pr</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEC 105 Introduction to Agricultural Economics</td>
<td>(3-0)</td>
<td>3</td>
</tr>
<tr>
<td>Communication elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GEOG 203 Planet Earth: Systems Science</td>
<td>(3-3)</td>
<td>4</td>
</tr>
<tr>
<td>POLS 207 State and Local Govt.</td>
<td>(3-0)</td>
<td>3</td>
</tr>
<tr>
<td>Free elective</td>
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</tr>
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</table>

16

JUNIOR YEAR

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Th-Pr</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPTS 420 Natural Resource Law</td>
<td>(3-0)</td>
<td>3</td>
</tr>
<tr>
<td>RENR 375 Conservation of Natural Resources</td>
<td>(3-0)</td>
<td>3</td>
</tr>
<tr>
<td>STAT 303 Statistical Methods</td>
<td>(3-0)</td>
<td>3</td>
</tr>
<tr>
<td>Environmental Policy electives</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>History elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

18

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Th-Pr</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRO 301 Soil Science</td>
<td>(3-2)</td>
<td>4</td>
</tr>
<tr>
<td>Natural Resources elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Environmental Policy elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>History elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Philosophy elective</td>
<td></td>
<td>3</td>
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16

SENIOR YEAR

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Th-Pr</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFSC 301 Wildlife and the Changing Environment</td>
<td>(3-0)</td>
<td>3</td>
</tr>
<tr>
<td>Environmental policy electives</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Natural Resources elective</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Professional experience elective (e.g. 484 or 485)</td>
<td></td>
<td>3</td>
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</tbody>
</table>

18

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Th-Pr</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>RENR 470 Environmental Impact Assessment</td>
<td>(3-0)</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRSC 461 GIS for Resources Management</td>
<td>(2-2)</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course</td>
<td>Hours</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>RENR 405 GIS for Environmental Problem Solving</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Environmental policy electives$^3$</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Free electives</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

**Total Hours 128**

**NOTES:**

1. Visual and performing arts elective to be selected from the University Core Curriculum. The University Core Curriculum also requires 6 hours of international and cultural diversity courses. This requirement may be met by courses satisfying another requirement in the curriculum if they also are on the approved list on international and cultural diversity courses (see page 18, Undergraduate Catalog).
2. Communication electives to be selected from the University Core Curriculum.
3. To be selected in consultation with faculty academic advisor from AGEC 344, 350, 429; ECON 202, 203, 323, 412, 435; FRSC 406; GEOG 401, 406; PHIL 314, 483; PLAN 365, 414; POLS 306, 329, 331, 340, 342, 347, 440, 461; SOCI 312, 328; WFSC 303.
4. Select from HIST 359, 360, 363, 364.
5. Select from PHIL 205, 314.
6. Select Life Sciences electives from AGRO, AGSM, BESC, ENTO, POSC, RENR, RLEM, RPTS, or WFSC in consultation with an advisor.
Appendix D

Texas A&M University Administrative Framework for Interdisciplinary Programs
AN ADMINISTRATIVE FRAMEWORK FOR INTERDISCIPLINARY PROGRAMS

A proposal by the Council of Deans for a method of administering interdisciplinary programs at Texas A&M University.

Interdisciplinary programs play a vital role for the creation and development of new academic activities in a modern research university. The Council of Deans is committed to strengthening and expanding interdisciplinary programs at Texas A&M University. The appropriate mechanism for administering such programs in conformity with Texas A&M University's strong college model is one that utilizes the Council of Deans as the principal overseer of academic programs and ensures that the involved departments are empowered to cooperate effectively. Without the active involvement of the deans of the colleges involved in interdisciplinary programs, there is diminished opportunity for academic coordination and success. Nurturing and support for these programs ultimately resides with the Office of the Provost, operating through the appropriate college structure. This document is intended to serve as a framework for initiating such programs. Implementation for any specific program must be accompanied by a program description that will be included as an appendix to this document.

We propose that:

1. A new step should be added to University procedures for establishing either an interdisciplinary faculty or an undergraduate or graduate interdisciplinary degree program. This step would require forwarding the proposal to the Council of Deans for consideration and approval. Thus, routing would be from the chair of the constituting faculty of the program, though the department head in which the program resides for
administrative purposes, through the Vice President for Research to the Council of Deans. Degree programs supported by the Council of Deans would then go through standard routing procedures.

2. The Council of Deans would determine a subset of Deans, called the Council of Participating Deans, to oversee the program. The Deans would be those whose participation is critical to the success of the interdisciplinary program. A Council of Participating Deans would also be established for each of the existing interdisciplinary programs.

3. The chairperson of the Council of Participating Deans will serve a rotating, three-year term and will represent a college with a significant role in the interdisciplinary program.

4. The faculty involved in developing and maintaining the interdisciplinary program would elect an executive committee to oversee all academic aspects of the program including: student recruitment, faculty membership, curriculum development, teaching assignments, seminar programs, and research enhancement programs such as training and program project grants. The chair or director of the executive committee would report to the Council of Participating Deans, through the chairperson of the Council of Participating Deans. Details of academic aspects specific to each program will be included in the appendix.
5. It is expected that the Council of Participating Deans will provide the fiscal and staff support necessary for the proper development and maintenance of the program. The interdisciplinary faculty, through the executive committee, will present an annual budgetary request outlining in detail the funds required to properly operate the interdisciplinary program in order to meet stated goals. Upon budget approval, the funds will be made available to the director or chair of the interdisciplinary program through the Office of the Vice President for Research and the chairperson of the Council of Participating Deans.

6. The Council of Participating Deans, the director or chair of the interdisciplinary program, the select set* of involved department heads, and the Vice President for Research (for research programs), the Dean of Graduate Studies (for graduate degree programs) or the Associate Provost for Undergraduate Programs (for undergraduate degree programs) will form a Program Council. The Program Council, chaired by the chair of the Council of Participating Deans, will provide oversight for the interdisciplinary program.

* The Council of Participating Deans should select a representative group of no more than five department heads to the program council. It is expected that the selected department heads will reflect the composition of the faculty participating in the interdisciplinary program.

7. The Program Council and the executive committee will develop an appropriate annual review process for faculty involved in the program, including recruitment, retention,
promotion and tenure. Each related department head will incorporate the results of this review into tenure and promotion deliberations.

8. A semi-annual meeting of the Program Council will be held to review the previous year's activities and to plan the coming year's activities. These meetings would be held in a timely fashion to ensure that adequate funding and personnel can be available for the next year's activities.

9. A rigorous periodic review (3 - 5 years) will be conducted by the Office of the Provost and the Council of Participating Deans in conjunction with the faculty executive committee to determine if the program is performing successfully and should be continued.

10. The Council of Participating Deans, the Executive Vice President and Provost, and the Vice President of Research will actively support the respective interdisciplinary programs. Possible means of support include the return of new academic funds generated by the programs (by semester credit hours) through approval of the annual budget, incentives for research development related to indirect costs and start-up funds, support of Chairs of the IDP in the form of a 0.3 – 0.5 FTE and a salary supplement, and support of faculty positions critical to the proper functioning of the interdisciplinary program. Specifics for each program will be detailed in an appendix to this framework document.
Appendix E

Organizational Chart for the
B.S. Degree in Environmental Studies
B.S. IN ENVIRONMENTAL STUDIES

Council of Participating Deans
Agriculture & Life Sciences (COALS) – E. Hiler
Geosciences (GEOS) – M. Richardson

Program Council
COALS and GEOS Deans
Assoc Provost Undergraduate Programs – M. Weichold
GEOS Director, Environmental Studies/Assoc Dean – V. Tchakerin
COALS Assoc Dean for Academic Affairs – K. Kubena
Chair, COALS Management Board

Director, GEOS B.S. Environmental Studies – V. Tchakerin
Dept of Atmospheric Sciences
Dept of Geology & Geophysics
Dept of Geography

COALS Management Board - Chair
Representatives of Participating Departments*
COALS Assoc Dean – K. Kubena
GEOS Assoc Dean, ad hoc member – V. Tchakerin

Teaching Faculty/Advisors
COALS Participating Departments
Agricultural Economics
Entomology
Forest Science
Plant Pathology & Microbiology
Rangeland Ecology & Management
Recreation, Park & Tourism Sciences
Wildlife & Fisheries Sciences
Soil & Crop Sciences

* Representatives of Participating Departments: Agricultural Economics – E. Rister; Entomology – D. Bay; Forest Science – to be named; Plant Pathology & Microbiology – D. Appel; Rangeland Ecology & Management – B. Knight; Recreation, Park & Tourism Sciences – S. Scott; Soil & Crop Sciences – T. Hallmark; Wildlife & Fisheries Sciences – S. Scott
Appendix F

Letters of Acknowledgement from
Department Heads and the College of Liberal Arts
Dr. Patricia Hurley, Head  
Political Science Department, College of Liberal Arts  
Texas A&M University  
CAMPUS Mail Stop 4348  

Dear Dr. Hurley,

Over the past year, a new curriculum for the College of Agriculture and Life Sciences has been developed. This curriculum will be named Environmental Studies, and has been designed to mirror the curriculum under the same name in the College of Geosciences in a cooperative agreement arranged by the Deans of the respective Colleges. As you will note on the attached memo, the COALS curriculum was designed to maintain the educational intent of the Geosciences curriculum. That is, to offer a science foundation by drawing on those disciplines within our College with a focus on environmental policy. Again, like Geosciences, we have listed courses from your department that our students will be expected to take.

I would appreciate your reviewing the curriculum and provide me with an acknowledgement of having been notified of our intent. We anticipate a total enrollment of 25 – 30 students over the next few years. If you consent to the development of the program, then your signature below would allow us to move forward. Otherwise, please give me your feedback so that I might proceed accordingly.

I might mention that I met some time ago with Dr. Blackwelder and she consented to our curriculum request with the suggestion that I contact each of the CLLA departments for your endorsement. As soon as possible, we will be submitting the request to the proper authorizing committees on campus. Thank you in advance for allowing us to expedite this process. We look forward to working with you on what we believe will be an excellent educational opportunity for our students.

Should you have any questions concerning the curriculum, please do not hesitate to call me. Again, thanks for the assistance.

Sincerely,

Dr. David N. Appel, Professor  
and Associate Department Head  
845-8273

Acknowledgement of receipt: 

Dr. Patricia Hurley, Head  
Political Science Department

xc: Dr. Julia Blackwelder, Associate Dean  
College of Liberal Arts  
Dr. Fuller Bazer, Exec. Associate Dean  
College of Agriculture
Dr. Leroy Dorsey, Head  
Journalism Department, College of Liberal Arts  
Texas A&M University  
CAMPUS Mail Stop 4111

Dear Dr. Dorsey,

Over the past year, a new curriculum for the College of Agriculture and Life Sciences has been developed. This curriculum will be named Environmental Studies, and has been designed to mirror the curriculum under the same name in the College of Geosciences in a cooperative agreement arranged by the Deans of the respective Colleges. As you will note on the attached memo, the COALS curriculum was designed to maintain the educational intent of the Geosciences curriculum. That is, to offer a science foundation by drawing on those disciplines within our College with a focus on environmental policy. Again, like Geosciences, we have listed courses from your department that our students will be expected to take.

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Sincerely,

Dr. David N. Appel, Professor  
and Associate Department Head  
845-8273

Acknowledgement of receipt:  

Dr. Leroy Dorsey, Head  
Journalism Department

xc:  
Dr. Julia Blackwelder, Associate Dean  
College of Liberal Arts  
Dr. Fuller Bazer, Exec. Associate Dean  
College of Agriculture
Dr. Leonard Auernheimer, Head  
Economics Department, College of Liberal Arts  
Texas A&M University  
CAMPUS Mail Stop 4228

Dear Dr. Auernheimer,

Over the past year, a new curriculum for the College of Agriculture and Life Sciences has been developed. This curriculum will be named Environmental Studies, and has been designed to mirror the curriculum under the same name in the College of Geosciences in a cooperative agreement arranged by the Deans of the respective Colleges. As you will note on the attached memo, the COALS curriculum was designed to maintain the educational intent of the Geosciences curriculum. That is, to offer a science foundation by drawing on those disciplines within our College with a focus on environmental policy. Again, like Geosciences, we have listed courses from your department that our students will be expected to take.

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Sincerely,

[Signature]

Dr. David N. Appel, Professor  
and Associate Department Head  
845-8273

Acknowledgement of receipt:  
[Signature]

[Notice that Econ 202 and 203 core prerequisites for Econ 323, Econ 412 and Econ 435]

xc: Dr. Julia Blackwelder, Associate Dean  
College of Liberal Arts  
Dr. Fuller Bazer, Exec. Associate Dean  
College of Agriculture

A member of the Texas A&M University System and its statewide Agriculture Program

2132 TAMU • College Station, Texas 77843-2132 • (979) 845-7311; FAX (979) 845-6883 • http://plantpathology.tamu.edu/
Dr. Rogelio Saenz, Head
Sociology Department, College of Liberal Arts
Texas A&M University
CAMPUS Mail Stop 4351

Dear Dr. Saenz,

Over the past year, a new curriculum for the College of Agriculture and Life Sciences has been developed. This curriculum will be named Environmental Studies, and has been designed to mirror the curriculum under the same name in the College of Geosciences in a cooperative agreement arranged by the Deans of the respective Colleges. As you will note on the attached memo, the COALS curriculum was designed to maintain the educational intent of the Geosciences curriculum. That is, to offer a science foundation by drawing on those disciplines within our College with a focus on environmental policy. Again, like Geosciences, we have listed courses from your department that our students will be expected to take.

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Should you have any questions concerning the curriculum, please do not hesitate to call me. Again, thanks for the assistance.

Sincerely,

[Signature]
Dr. David N. Appel, Professor
and Associate Department Head
845-8233

Acknowledgement of receipt:

[Signature]
Dr. Rogelio Saenz, Head
Sociology Department

xc:  Dr. Julia Blackwelder, Associate Dean
   College of Liberal Arts

   Dr. Fuller Bazer, Exec. Associate Dean
   College of Agriculture

A member of the Texas A&M University System and its statewide Agriculture Program
Dr. Walter Buenger, Interim Head  
History Department, College of Liberal Arts  
Texas A&M University  
CAMPUS Mail Stop 4236

Dear Dr. Buenger,

Over the past year, a new curriculum for the College of Agriculture and Life Sciences has been developed. This curriculum will be named Environmental Studies, and has been designed to mirror the curriculum under the same name in the College of Geosciences in a cooperative agreement arranged by the Deans of the respective Colleges. As you will note on the attached memo, the COALS curriculum was designed to maintain the educational intent of the Geosciences curriculum. That is, to offer a science foundation by drawing on those disciplines within our College with a focus on environmental policy. Again, like Geosciences, we have listed courses from your department that our students will be expected to take.

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I might mention that I met some time ago with Dr. Blackwelder and she consented to our curriculum request with the suggestion that I contact each of the CLLA departments for your endorsement. As soon as possible, we will be submitting the request to the proper authorizing committees on campus. Thank you in advance for allowing us to expedite this process. We look forward to working with you on what we believe will be an excellent educational opportunity for our students.

Should you have any questions concerning the curriculum, please do not hesitate to call me. Again, thanks for the assistance.

Sincerely,

[Signature]

Dr. David N. Appel, Professor  
and Associate Department Head  
845-8273

Acknowledgement of receipt:  

[Signature]

Dr. Walter Buenger, Interim Head  
History Department

xc:  

Dr. Julia Blackwelder, Associate Dean  
College of Liberal Arts  

Dr. Fuller Bazer, Exec. Associate Dean  
College of Agriculture
November 22, 2002

Dr. Robin Smith, Head
Philosophy & Humanities Department, College of Liberal Arts
Texas A&M University
CAMPUS Mail Stop 4237

Dear Dr. Smith,

Over the past year, a new curriculum for the College of Agriculture and Life Sciences has been developed. This curriculum will be named Environmental Studies, and has been designed to mirror the curriculum under the same name in the College of Geosciences in a cooperative agreement arranged by the Deans of the respective Colleges. As you will note on the attached memo, the COALS curriculum was designed to maintain the educational intent of the Geosciences curriculum. That is, to offer a science foundation by drawing on those disciplines within our College with a focus on environmental policy. Again, like Geosciences, we have listed courses from your department that our students will be expected to take.

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Should you have any questions concerning the curriculum, please do not hesitate to call me. Again, thanks for the assistance.

Sincerely,

[Signature]

Dr. David N. Appel, Professor
and Associate Department Head
845-8472

Acknowledgement of receipt:

[Signature]

Dr. Robin Smith, Head
Philosophy and Humanities Department

xc: Dr. Julia Blackwelder, Associate Dean
College of Liberal Arts

Dr. Fuller Bazer, Exec. Associate Dean
College of Agriculture

A member of The Texas A&M University System and its statewide Agriculture Program
MEMORANDUM

TO: Rodney Hill
   Associate Dean, Architecture

FROM: Mary Jo Richardson
       Associate Dean

SUBJECT: Environmental Science Degree Proposal

As I mentioned to you on the telephone, the College of Geosciences is proposing an Environmental Science degree. Attached are the executive summary of the degree program, the program potential table, and appendix I (the four-year plan for the degree). Please let me know if there are additional courses in the College of Architecture that should be added to the Environmental Policy menu. The degree program requires selection of 12 hours of Environmental Policy courses. The present list of those courses includes PLAN 365 and PLAN 414 (see attached).

Please indicate your support for our proposal by signing a copy of this memo and returning it to me at your earliest convenience.

Rodney Hill

June 19, 2001
Appendix G

Descriptions of Required and Supporting Courses
in the College of Agriculture and Life Sciences
Descriptions of Required and Supporting Courses
in the College of Agriculture and Life Sciences

Courses listed are available as required or supporting courses for students pursuing the B.S. Degree in Environmental Studies with a focus on biological sciences, natural resources and measurement of related environmental parameters.

AGEC – Agricultural Economics

105. Introduction to Agricultural Economics. (3-0). Credit 3. I, II, S
Characteristics of our economic system and basic economic concepts; survey of the farm and ranch firm and its organization and management; structure and operation of the marketing system; functional and institutional aspects of agricultural finance; government farm programs.

350. Environmental and Natural Resource Economics. (3-0). Credit 3. I, II
Inspection of issues such as environmental degradation, population growth, recycling, water use and depletion, natural habitat protection, water and air pollution, acid deposition, fishery management, and global warming using economically derived principles and tools. Prerequisite: Junior classification or approval of instructor.

344. Agricultural Law. (3-0). Credit 3. I, II
Legal problems relevant to agribusiness; torts, fencing laws, liability for agricultural pollution, irrigation water rights, corporations and partnerships. Prerequisite: Junior classification or approval of instructor.

429. Agricultural Policy. (3-0). Credit 3. I, II
Analysis of the causes, nature and effects of government participation in agriculture; interrelationship of American agriculture and the political and economic system, public administration and interest representation. Prerequisite: AGEC 105 or equivalent.

AGRO - Agronomy

301. Soil Science. (3-2). Credit 4. I, II, S An introduction to the nature and properties of soils. Application of science and technology to the use of this natural resource and the roles in the environment. Prerequisite: CHEM 101 or equivalent.*

AGSM – Agricultural Systems Management

301. Systems Analysis in Agriculture. (3-0). Credit 3. I Operations research and systems theory applied to management problems in food and agricultural industries; linear programming, queuing theory, simulation and critical path method; provides students with the knowledge and computer skills to better manage resources for the evolving agricultural industries. Prerequisite: Junior or senior classification or approval of instructor.
337. Technology for Environmental and Natural Resource Engineering. (3-0). Credit 3. I
For the non-engineering student in the environmental and management sciences; concentrates on
the application of technology for solving local environmental problems while considering
global issues; reduction of water, air and hazardous waste pollutants; legislative issues and
modeling. Prerequisites: AGRO 301 or approval of instructor; MATH 131 or 142.

BESC – Bioenvironmental Sciences

201. Introduction to Bioenvironmental Sciences. (3-0). Credit 3. An introduction to the
biological components of environmental sciences, with emphasis on the impact of the world’s
population on global resources; lectures by research scientists reflecting their disciplinary
perspective in relevant areas.

401. Bioenvironmental Microbiology. (3-0). Credit 3. The interactions of microorganisms in
diverse environments; applied aspects of microbial interactions in the environment, their
effects on the environment, and potential use to solve environmental problems. Prerequisites:
AGRO 405 and 3 hours of organic chemistry, or equivalents; or approval of instructor.

403. Sampling and Environmental Monitoring. (2-3). Credit 3. Introduction to environmental
sampling and methodology; strategies and analyses of sampling data; overview of current
applications of sampling and monitoring in the environmental sciences; emphasis on practical
aspects of sampling from air, soil and water; detection and quantification of microbial and
chemical unknowns in environmental media. Prerequisite: Junior or senior classification or
approval of instructor.

FRSC – Forest Science

304. Forest Ecology. (3-0). Credit 3. I Life history and general characteristics of trees; structure
and function of forest ecosystems; fundamental principles of forest tree physiology and ecology
applied to an analysis of tree growth in relation to environmental factors and present
day forest management; global changes and forests. Prerequisite: Junior or senior classification
or approval of instructor.*

305. Silviculture. (3-3). Credit 4. II The theory and practice of controlling forest establishment,
composition, structure and growth; principles of natural and artificial regeneration; intermediate
cultural operations; silvicultural systems; use and control of fire in forests.

406. Forest Policy. (3-0). Credit 3. I Forest policy development in the United States and review
of current issues in forest and related natural resource policy. Prerequisite: Senior classification
or approval of instructor.

421. Urban Forestry. (3-0). Credit 3. II Conceptual role of trees in improving the urban
environment; optimum use of existing forested areas and the establishment of trees in
appropriate open spaces; tree ordinances, species evaluation, street tree planning and tree
inventory systems. Prerequisite: Approval of instructor.*
Geographic Information System (GIS) approach to the integration of spatial and attribute data to study the capture, analysis, manipulation and portrayal of natural resource data; examination of data types/formats, as well as the integration of GIS with remote sensing and Global Positioning System; laboratory includes extensive use of GIS applications to conduct analyses of topics in natural resources. Prerequisite: Approval of instructor.

ENTO - Entomology

403. Urban Entomology. (2-3). Credit 3. II Biology, economic importance and control strategies for arthropod pests commonly invading households and commercial structures in urban environments; laboratory consists of urban pest identification and special presentations and demonstrations covering topics related to urban pest problems and their control. Prerequisite: ENTO 201 or equivalent or approval of instructor.

424. Insect Ecology. (2-3). Credit 3. II Provides basic ecological background with an applied interpretation, emphasizing influences of insect populations and communities on ecosystem processes that influence landscape structure, function and change. Prerequisites: ENTO 201 or equivalent; 3 hours of biological sciences.

POSC- Poultry Science

427. Animal Waste Management. (3-0). Credit 3. An applied approach to current and emerging issues relating to responsible management of animal waste; the role of biological aspects of production management decisions evaluated in an examination of regulatory and environmental requirements; current case studies and exposure to field situations. Field trips will be required for which departmental fees may be assessed.

RENR- Renewable Natural Resources

205. Fundamentals of Ecology. (3-0). Credit 3. I, II Principles of ecology using a holistic approach treating plants, animals and humans as one integrated whole; composition, structure, nutrient cycles and energetics of biotic communities; adaptations to environmental factors; biotic relationships; and problems of environmental quality and resource use.

405. GIS for Environmental Problem Solving. (2-2). Credit 3. Interdisciplinary approach to train students to integrate GIS and relevant technologies for environmental problem solving; helps students relate learning to real world situations; students conceptualize, develop and manage projects using real data; one term project required. Prerequisite: RENR 201 or equivalent or approval of instructor.

470. Environmental Impact Assessment. (3-0). Credit 3. The evolution of natural resources regulatory policies and how this influences current procedures for environmental/natural resources assessment and management; demonstration of the environmental impact assessment procedures and policy issues associated with environmental impacts. Prerequisite: Senior classification or approval of instructor.
RLEM - Rangeland Ecology and Management

301. Range and Forest Watershed Management. (2-2). Credit 3. I, II Elements of watershed management and principles and practices of range and forest land management for protection, maintenance and improvement of water resource values.*

320. Landscape Restoration. (1-2). Credit 2. I, II Restoration of wildland landscapes for natural areas, wildlife habitat, livestock production, or low-maintenance esthetic appeal; blend of traditional and ecological philosophies and approaches toward the design and development of low-input, sustainable landscapes; design and implement small landscape restoration projects for class-determined objectives. Prerequisite: BOTN 101 or RENR 205.*

RPTS - Recreation Park and Tourism Sciences

316. Recreational Management of Wildlands. (3-0). Credit 3. I, II Management and recreational use of wild and wilderness areas and multiple use management areas; systems and techniques for dealing with management problems in outdoor recreation. Prerequisite: RPTS 307 or approval of instructor.*

420. Natural Resource Law. (3-0). Credit 3. Basic legal relationships and issues involved in the management, development and allocation of natural resources; includes federal, state and local statutes, administrative rules and judicial decisions; alternative dispute resolution theories and techniques. Cross-listed with RENR 420.

426. Tourism Impacts. (3-0). Credit 3. Consequences and impacts of various kinds of tourism development for host communities and regions; read and evaluate case studies from Texas, other areas in the United States and internationally; economic, environmental, social, cultural and political impacts associated with tourism proposals, project development, tourist activity, industry expansion and industry decline. Prerequisite: RPTS 202 or approval of instructor.

460. Development and Management of Protected Areas. (3-0). Credit 3. I, II Case studies illustrating social, political, and legal influences on the development and management of parks, refuges, wilderness and other protected areas; interaction between protected-area management and tourism development in neighboring communities and regions; interpretation of social contexts. Prerequisites: RPTS 307 or 316, or 9 hours of credit in natural resource courses. Cross-listed with RENR 460.*

WFSC - Wildlife and Fisheries Sciences

201. Wildlife Conservation and Management. (3-0). Credit 3. I, II Introduction to ecological principles used to conserve and manage wildlife resources at the individual, population and community levels. Topics include conservation biology, species interactions, animal-habitat relationships, population dynamics and harvesting, habitat management and restoration and human dimensions of fish and wildlife conservation. Prerequisite: RENR 205.*
301. Wildlife and the Changing Environment. (3-0). Credit 3. I, II Using an ecosystem approach, this course analyzes changes in the North American environment; effects of these changes on wildlife populations; and reviews areas of major, current concern. Prerequisites: Junior or senior classification; restricted to non-majors

303. Fish and Wildlife Laws and Administration. (3-0). Credit 3. II A review and analysis of state and federal laws and international treaties and conventions affecting fish and wildlife; their application and administration; organizational structure of state, federal and international agencies; their objectives, policies and practices. Prerequisite: Junior classification.

403. Animal Ecology. (2-3). Credit 3. I, II Concepts of animal ecology which emerge at various levels of organization; the ecosystem, the community, the population and the individual; laboratories emphasis on the quantitative analysis of field data and the simulation of population dynamics. Prerequisites: WFSC 201 and RENR 205 or approval of instructor; junior classification.*

405. Urban Wildlife and Fisheries. (3-0). Credit 3. II Urban wildlife and fisheries trains students to establish and maintain diverse, self-sustaining urban wildlife and fish populations at levels in harmony with ecological, social, and economic values of the human community and to develop optimal levels of public appreciation and use of urban wildlife and fish resources and associated habitats. Prerequisites: WFSC 201; RENR 205 and 215; junior or senior classification.
Appendix H

Projected Course Offerings (Years 1-5) for
the B.S. Degree in Environmental Studies
Projected Course Offerings (Years 1-5) for  
B.S. Degree in Environmental Studies  
College of Agriculture and Life Sciences

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Appendix I

List of Participating Faculty
College of Agriculture and Life Sciences Faculty
Participating in the B.S. Degree in Environmental Studies

Department of Agricultural Economics

Boadu, Frederick O.  Associate Professor.  Ph.D., 1980, University of Kentucky.  
Anticipated contribution: AGEC 344

Anticipated contribution: AGEC 105

Anticipated contribution: AGEC 350

Jones, Lonnie L.  Professor.  Ph.D., 1967 Ohio State University.  
Anticipated contribution: AGEC 105

Knutson, R.  Professor.  Ph.D. University of Minnesota.  Field: Policy, marketing, rural  
development.  Anticipated contribution: AGEC 429

Lard, Curtis Franklin, Professor.  Ph.D., 1963 Michigan State University.  Field: Land  
Economics Appointed 1967.  Anticipated contribution: AGEC 105

Anticipated contribution: AGEC 105

Richardson, James W., Professor.  Ph.D., 1978 Oklahoma State University.  
Anticipated contribution: AGEC 429

Womack, Abner W., Professor.  Ph.D., 1976 University of Minnesota.  
Anticipated contribution: AGEC 429

Anticipated contribution: AGEC 350
Department of Agricultural Education

Anticipated contribution: AGLS 101

Department of Biological and Agricultural Engineering

Anticipated contribution: AGSM 337

Anticipated contribution: AGSM 301

Department of Entomology

Anticipated contribution: ENTO 424

Anticipated contribution: ENTO 403

Department of Forest Science

Anticipated contribution: FRSC 406

Anticipated contribution: FRSC 421

Anticipated contribution: FRSC 302

Anticipated contribution: FRSC 304
Messina, Mike Professor Ph.D., 1983 North Carolina State University.  
Anticipated contribution: FRSC 305

Srinivasan, Raghavan Associate Professor Ph.D., 1992 Purdue University. Field:  
Anticipated contribution: FRSC 461

Department of Plant Pathology and Microbiology

Appel, David N. Professor Ph.D., 1980, Virginia Polytechnic Institute and State University.  
Field: Forest Pathology Appointed 1981.  
Anticipated contribution: BESC 489.

Anticipated contribution: BESC 201

Scholthof, Karen-Beth G. Associate Professor. Ph.D., 1989, University of Kentucky.  
Anticipated contribution: BESC 314


Department of Poultry Science


Department of Rangeland Ecology and Management

Anticipated contribution: RENR 410

Smeins, Fred E. Professor. Ph.D., 1967 University of Saskatchewan.  
Anticipated contribution: RENR 470

Wu, Xinyuan Associate Professor. Ph.D., 1991 University of Tennessee.  
Anticipated contribution: RENR 205
**Anticipated contribution:** RENR 205

**Anticipated contribution:** RLEM 320

Knight, Robert  Associate Professor. Ph.D., 1980 Texas A&M University.  
**Anticipated contribution:** RLEM 301

Loh, Douglas K.  Associate Professor. Ph.D., 1984 Texas A&M University.  
**Anticipated contribution:** RENR 405

**Department of Recreation, Park and Tourism Sciences**

Kaiser, Ronald A.  Professor. J.D., 1977 Thomas Cooley Law School  
**Anticipated Contribution:** RENR 375

**Anticipated Contribution:** RPTS 307

**Anticipated Contribution:** RPTS 460

**Department of Soil and Crop Sciences**

Hallmark, Thomas  Professor. Ph.D., 1977 Ohio State University.  
**Anticipated contribution:** AGRO 301

**Department of Wildlife and Fisheries Sciences**

Von Zharen, W.  Professor. J.D., 1987 University of South Carolina Law School,  
**Anticipated contribution:** WFSC 303
Anticipated contribution: RENR 205

Winemiller, Kirk O. Professor Ph.D., 1987 University of Texas at Austin.
Anticipated contribution: RENR 205

Anticipated contribution: WFSC 405
Appendix J

Letter of Support – Texas A&M University Libraries
July 7, 2003

Dr. Karen Kubena  
Associate Dean for Academic Affairs  
College of Agriculture & Life Sciences  
TAMU Campus

Dear Dr. Kubena:

The Texas A&M University Libraries can support the BS degree in Environmental Studies. When we wrote an initial letter regarding library support for this program in 2001, the library resources were quite adequate in terms both of geosciences resources and those policy-related resources necessary for teaching and research in this area. Since that time the library has been able to continue to keep current with publications supporting this field, and over the past two years we have added significant numbers of scholarly journals in electronic formats that will only strengthen our ability to provide students in this program the information they will need.

Sincerely,

Charles L. Gilreath  
Associate Dean for Advanced Studies