

OKLAHOMA STATE UNIVERSITY
ACADEMIC PROGRAM REVIEW
EXECUTIVE SUMMARY

DEPARTMENT OR DEGREE PROGRAM: Environmental Science Graduate Program

Address items specified in OSRHE policy on program review (VI-Content of Program Review Reports): description of review process, program objectives, student outcomes assessment, and program recommendations. Please limit this summary to 1 or 2 pages.

The Environmental Science Graduate Program (ESGP) is an interdisciplinary graduate degree program located within the Graduate College. Since its founding in 1977, the program has graduated more than 250 students who have found employment in industry, consulting, government, education, and non-profit organizations. It is currently directed by a half-time faculty member, who is assisted by a full-time staff member appointed as program coordinator. A Steering Council of 20 faculty members elected from five Colleges serves as an internal advisory board. An external Environmental Programs Advisory Board composed of 20 leaders of private sector organizations in Oklahoma provide further guidance and support. Students enrolled in the program can take single-discipline courses from any department at OSU that have been approved by the students' committees and placed on their plans of study. The ESGP also offers 13 interdisciplinary courses under its own prefix (ENVR), which are taught by the Director, adjunct faculty paid by the program, or regular departmental faculty who donate their time. About 2/3 of ES students are enrolled at the Stillwater campus and most of the remaining 1/3 are enrolled at the Tulsa campus. Two of our students take courses at a distance. We have reached a total enrollment of 106 students this semester (spring 2005) – a historic high. Almost 2/3 of these students are seeking doctoral degrees.

This review of the ESGP was developed by the program's Director and Coordinator. Statistical information was obtained from the Office of Institutional Research website as well as from the program's own records.

At the time of the last review in 1999, the ESGP was located within the office of the Vice President for Research (VPR) and enjoyed substantial financial and administrative support from the Environmental Institute. In 2002, the ESGP was returned administratively to the Graduate College while the Environmental Institute (EI) remained under the VPR. In 2003, most of the funding of the Environmental Institute was eliminated along with its staff positions. The EI defunding, coupled with two ESGP budget cuts totaling 8.6%, significantly reduced ESGP resources. Nevertheless, under the guidance of a new Director hired in August 2002, we have instituted several reforms that have improved the administration and productivity of the program.

1. The internal Steering Council was reorganized in 2002 and its members elected to two-year terms by self-identified environmental faculty from five Colleges. Most of the business of the Council is conducted in three standing committees. This change has made it easier to gain consensus on program changes, improved the coherence and consistency of program policy over time, and has increased attendance at Council meetings.
2. An external Environmental Programs Advisory Board (EPAB) was established in 2003 to provide advice on ESGP curriculum for a changing work environment and to help raise funds to benefit our students.
3. In 2003, a policies and procedures manual was developed for the first time, which consolidates program requirements and makes these available on our ESGP website. This manual has eliminated much of the previous confusion about rules relating to the matriculation of students through the program.
4. Three specializations were added in 2003 and 2004 to provide structure to our curriculum and aid recruitment efforts. Additional specializations are planned.
5. Eight environmental accomplishment awards were established and an annual environmental awards banquet was initiated in 2003. The banquet has been very successful, attracting more than 100 attendees at each of the first two. We have recruited renowned speakers to deliver keynote addresses and brought attention to the achievements of our faculty, students, and staff at OSU.
6. Encouraged by the results of a telephone survey conducted of alumni in 2004, we founded an ES Alumni Association and held its first meeting to elect officers and frame a constitution. We hope that this association will strengthen ties with our alumni and encourage their support.
7. Enrollment in our program reached 106 graduate students this spring (66 doctoral and 40 masters); we are now among the ten largest graduate programs at OSU.

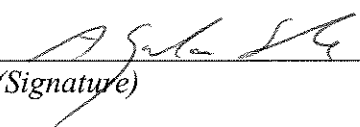
8. OSU-Tulsa enrollment has grown from about 10 five years ago to a historic high of 32 in 2004. We have also increased the support of the Tulsa program from \$25,000 per year to teach four courses to \$54,900 to teach seven courses and pay for a half-time advisor/recruiter.
9. Private sector donations to our program started in 2004. We have raised more than \$5000 so far.
10. We have improved our outreach efforts by developing and distributing a CD (in 2002) and program brochures (in 2003), improving our website (2004), and creating databases that link students to faculty students to employers, and current students to alumni (2004).
11. We have worked with the Graduate College to ensure that credit is given to departments who allow their faculty to advise our students. This will help encourage support by these faculty.
12. In 2002, our program joined the Council of Environmental Deans and Directors – a national organization of the leaders of environmental programs established the previous year. Our Director is a member of its executive board and co-chair of its curriculum committee. As such, the ESGP is significantly enhancing its national profile and leading the effort to shape the definition of core competencies that will guide curriculum development over the next several years.

With respect to the goals that were set in the 1999 review, we have had limited success.

1. Due to budget cuts and the elimination of EI funding in 2003, we were not able to obtain state funding of ES student teaching and research assistantships. We have since begun exploring private sector contributions and have renewed our efforts to obtain state funding.
2. Budget cuts and EI defunding also prevented us from compensating faculty for teaching ENVR courses and advising ES students. We were successful however in convincing the Graduate College to give credit to departments for advising our students. We have renewed our efforts to obtain state funding for teaching ENVR courses.
3. The budget cuts have also limited our progress in developing more courses for distance delivery. In 2003, before the defunding of the EI, we did fund two professors to convert two courses for distance delivery; one was offered in 2004 and the other will be offered in 2005. Funds for additional distance courses are not available. However, the Director has converted three of his courses for distance delivery, which are taught every two years, and one of the adjunct professors teaching ENVR courses offers her course at distance every year. Unless funds are obtained, we will be forced to abandon our plans for a distance curriculum.
4. The 1999 review sought to increase enrollment from the previous five-year average of 100 by generating a CD and replacing paper application forms with electronic ones. However, when the current Director assumed program direction in 2002, enrollment had dropped to 71. We generated the CD, eliminated the need for admission forms to the ES program, improved our website, and worked harder at recruitment fairs and have since returned enrollment to more than 100.

Our goals for the next five years are:

1. Triple the number of ENVR lecture and readings courses offered on a rotating basis from 7 to 21, which will require funds to compensate faculty
2. Double the number of specializations from five to ten
3. Increase enrollment to 130 (including a 50% increase at the Tulsa campus)
4. Establish five \$15,000 doctoral fellowships
5. Establish eight \$500 travel stipends
6. Establish better relations with alumni and obtain their financial help in supporting ES students
7. Raise \$250K in private donations to benefit the ESGP
8. Attempt to raise \$1.2M to endow a chair in environmental science

Dean 
(Signature)

Date 3/3/05

Note: Complete one of these forms for each degree program

OKLAHOMA STATE REGENTS FOR HIGHER EDUCATION

2004 - 2005

ACADEMIC PROGRAM REVIEW

BACCALAUREATE, MASTERS & DOCTORAL DEGREES

OKLAHOMA STATE UNIVERSITY

Environmental Science Graduate Program

Title of unit or degree program reviewed (Level III)

With options (Level IV) in: No officially approved options

Master of Science in Environmental Science

Degree designation as on diploma (Level II)

ENVR

Formal degree abbreviation (Level I)

Degree-granting academic unit: Environmental Science Graduate Program C1501
(Name) (Cost Center)

CIP code 3 0 0 1 0 1

HEGIS code 4 9 0 2

Instructional Program code 0 9 1

Name of department head: Dr. Will Focht
(person who oversees degree program listed above)

Program holds specialized accreditation from: No specialized accreditations exist for Env. Sci.

Name and title of contact person: Dr. Will Focht
(Name)
Director
(Title)

Date of Institutional Governing Board Review: _____

President _____ Date: _____
(Signature)

OKLAHOMA STATE REGENTS FOR HIGHER EDUCATION

2004 - 2005

ACADEMIC PROGRAM REVIEW

BACCALAUREATE, MASTERS & DOCTORAL DEGREES

OKLAHOMA STATE UNIVERSITY

Environmental Science Graduate Program

Title of unit or degree program reviewed (Level III)

With options (Level IV) in: No officially approved options

Doctor of Philosophy in Environmental Science

Degree designation as on diploma (Level II)

ENVR

Formal degree abbreviation (Level I)

Degree-granting academic unit: Environmental Science Graduate Program C1501
(Name) (Cost Center)

CIP code 3 0 0 1 0 1

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Name of department head: Dr. Will Focht
(person who oversees degree program listed above)

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Name and title of contact person: Dr. Will Focht
(Name)
Director
(Title)

Date of Institutional Governing Board Review: _____

President: _____ Date: _____
(Signature)

OVERVIEW

A. Description of the Departmental/Program Review Process. *(Briefly describe how the review was conducted and who was involved.)*

The review was conducted by the ESGP Director and the Program Coordinator with input from the Environmental Science Steering Council. The ES Steering Council is comprised of 20 faculty members representing five Colleges at OSU. The Council members advise the Director on the operation of the program, including curriculum design, student admissions and retention, student advisement, strategic planning, and environmental awards.

The review presents the analysis of data collected during December 2004 and January 2005. The 2003 and 2004 alumni assessment results were also included in the analysis.

B. Recommendations from Previous Program Reviews. *(Discuss actions taken to address the recommendations of program faculty from the 1999 program review.)*

1. Student Assistantships

- 1999 Concern and Recommendation. Students obtain comparatively little funding from departments across campus. No TA or RA funds are directly available from the ES Program for student support. State supported funding would improve the students' abilities to do research and teach. This is especially important in fields where graduate assistantships are difficult to find. We recommend that funding of ES student graduate assistantships be accomplished through the ES Program itself.
- Actions Taken Since 1999. Unfortunately, university budget cuts were imposed in 2003, which reduced the ESGP budget by 8.6%. In addition, the budget of the Environmental Institute, which had subsidized the ESGP since 1992, was reduced by 90% in 2003. Therefore, we were not able to fund any assistantships within the ESGP budget. However, in 2003, the program established an external Environmental Programs Advisory Board (EPAB) to advise us on program direction and identify sources of external funding. To date, we have raised \$5000 for student support, which we are using to fund student travel to professional conferences to present their research. We hope to continue exploring funding opportunities for support of student research through EPAB and through continuing efforts to increase our ESGP budget within OSU.

2. Compensation of Advisors and Credit to Departments for Advising ES Students

- 1999 Concern and Recommendation. Advisors are not compensated nor given credit within their departments for advising ES students. Our first recommendation is to identify means for appropriately compensating advisors for the growing OSU-Tulsa ES student population. Our second recommendation is to seek ESGP funding of teaching assistantships in advisors' departments to improve the ESGP's relationship with those departments and thereby encourage faculty to advise more ES students. Our third recommendation is to offer paid joint appointments in the ESGP for those who teach environmentally related courses.
- Actions Taken Since 1999. Given the budget cuts reported above, we were not able to secure funding to compensate ES student advisors nor pay for joint appointments to teach environmentally-related courses. In addition, departments did not express much interest in co-funding ES students to teach their courses. We have since decided to initiate efforts to secure funding to compensate faculty for teaching ENVR courses, which we believe is more likely to attract university support than compensating faculty for teaching environmentally-related courses in their own departments, advising ES students, or compensating departments for ES TAs. We have also successfully lobbied the Graduate College to assign enrollment credit to departments that advise ES students when the students enroll in ENVR thesis and dissertation hours.

3. Distance Education

- 1999 Concern and Recommendation. We have just initiated an environmental management specialization within the ESGP, which we hope will attract students in Tulsa and elsewhere. These students will likely not be able to attend classes in Stillwater. Therefore, we need to encourage faculty to offer their environmentally related courses using distance technologies. Our recommendation is to secure funding to compensate faculty to develop distance courses that will attract ES students in general and environmental management students in particular at other sites.

- Actions Taken Since 1999. We funded two professors to convert their courses into a distance format in 2003. One of these was offered in fall 2004. We plan to offer the other in fall 2005. In addition, the Director offers three courses at a distance and one of the adjunct professors offers one course at a distance. We cannot compensate additional faculty for distance course conversion because of recent budget cuts. We are not currently seeking funds for any additional course conversions, preferring instead to develop new ENVR courses.

4. Program Expansion and Enrollment Growth

- 1999 Concern and Recommendation. ESGP enrollment had remained static during the previous five years (103 in 1994 to 98 in 1998). Our first recommendation to restart growth is to develop new marketing and enrollment methods such as an ESGP website and on-line student application forms. Our second recommendation is to replace paper program brochures with CD-ROMs that are cheaper to produce and ship, especially overseas.
- Actions Taken Since 1999. Enrollment had fallen from 98 in 1998 to 71 in 2002. In late 2002, we completed development of a program CD and distributed 800 copies to potential students by mail and at recruitment fairs. We have also developed an ESGP website that includes program information and application directions. The Graduate College has developed on-line application forms for enrollment at OSU. The ESGP has not developed on-line application forms because we do not require separate application forms. Our enrollment has increased from 71 in 2002 to 106 students in Spring 2005 – our highest enrollment ever.

CRITERION I Program Centrality

- A. Goals and Objectives of Degree Programs.** *(List each degree option, its clientele, objectives, and expected student outcomes. For program clientele, briefly describe the students in the program, e.g., are they primarily full-time traditional college-age students in Stillwater or part-time nontraditional students in Tulsa? Expected student outcomes for the degree program are described in the program's Student Outcomes Assessment Plan).*

Degree Program: Master of Science

Program Clientele: Primarily full-time college-age graduate students in Stillwater but primarily part-time nontraditional graduate students in Tulsa and distance venues

Program Objectives: Prepare graduates for employment as entry-level environmental professionals able to participate in finding solutions to environmental problems facing Oklahoma and elsewhere, as defined by the external Environmental Programs Advisory Board, ES Alumni, ES student employers and internship sponsors, professional environmental organizations, and environmental education associations; most MS graduates find rewarding careers in industry, consulting, government, and non-government organizations

Expected Student Outcomes: Interdisciplinary understanding and appreciation of the interdependent relationships between social and natural systems, and the skills to analyze, synthesize, manage, and disseminate environmental knowledge and research to find practical solutions to complex environmental problems

Degree Program: Doctor of Philosophy

Program Clientele: Primarily full-time college-age graduate students in Stillwater but primarily part-time nontraditional graduate students in Tulsa and distance venues

Program Objectives: Prepare graduates for employment as advanced environmental professionals able to manage teams in finding solutions to the environmental problems facing Oklahoma and elsewhere, as defined by the external Environmental Programs Advisory Board, ES Alumni, ES student employers and internship sponsors, professional environmental organizations, and environmental education associations; most PhD graduates find rewarding careers in higher education, industry, consulting, and government.

Expected Student Outcomes: Advanced interdisciplinary understanding and appreciation of the interdependent relationships between social and natural systems, and the skills to analyze, synthesize, manage, and disseminate environmental knowledge and research to find practical solutions to complex environmental problems.

- B. Linkage of the Program to Institution's Mission.** *(Use the mission "Proud of its land grant heritage, Oklahoma State University advances knowledge, enriches lives, and stimulates/enhances economic development through instruction, research, outreach, and creative activities" or the final version of the OSU mission.)*

Consistent with its strategic plan, the ESGP prepares students for effective participation as environmental professionals in finding sustainable solutions to resource stewardship problems that balance the enhancement of natural, economic, social, human, and political capital to improve the quality of life of all citizens.

CRITERION II

Program Curriculum and Structure

A. Program Structure. *(Attach copies of the current degree requirements sheets).*

Degree requirements sheets are not required of graduate programs; however, the following information is provided.

The MS degree requires 36 hours of graduate coursework. All students must complete the Environmental Science Seminar (ENVR 5300), a general ecology course, a graduate physical science course, and a graduate social science course. Three options for the completion of degree requirements are:

- Degree Option I – Thesis: 30 hours of coursework and 6 hours of thesis
- Degree Option II – Report: 34 hours of coursework and 2 hours of thesis
- Degree Option III – Creative Component: 36 hours of coursework (reserved to environmental management students who defend a report on their internship and students who have alternative creative materials such as films, software, curricula, designs, books and journal articles that do not qualify as a research thesis or report)

The PhD. degree requires 60 hours of graduate coursework beyond a masters degree or 90 hours of graduate coursework beyond a baccalaureate degree, and completion of ENVR 5300, ecology, graduate physical science, and graduate social science courses. Insofar as research is concerned, the student must pass a written and oral qualifying exam at the end of their coursework, defend a dissertation prospectus, complete 15-24 hours of dissertation research, and orally defend the dissertation before his or her committee.

B. Distance Education. *(List the courses offered by electronic or other distance delivery methods.)*

ENVR 5300 is delivered via the Internet once every two years and by compressed video of alternating years. We augment our curriculum with distance courses taught in other departments such as political science, agricultural economics, applied health and educational psychology, management, zoology, civil engineering, and industrial engineering. The program would like to increase distance course offerings to include at least four ENVR courses every year. However, unless additional funds are found to compensate faculty for the conversion of their existing courses for distance delivery, we prefer to devote our limited resources to the development of new courses – some of which may be suitable for distance delivery.

C. Articulation Agreement. *(Identify the articulation (2+2) agreements the program has with community colleges).*

The ESGP, being a graduate program, does not enter into articulation agreements with community colleges.

D. Multidisciplinary Programs. *(Briefly describe how program faculty participates in multidisciplinary programs with other OSU departments or other institutions).*

Our interdisciplinary program was established in 1977 to explore the interdependent relationships between human and natural systems. We work with more than 120 faculty members across the campus in five colleges who are acutely aware of environmental problems and we encourage them to work with other educational institutions and with the public and private sectors.

The ESGP recruits faculty from more than 30 departments to advise and support ES graduate students and to teach courses that will attract these students. Twenty of them also serve on our Steering Council and its committees to assist in program administration. Currently, we have no funds to compensate these faculty for their support. However, we have initiated a request to increase our budget to provide such compensation.

CRITERION III Program Resources

A. New facilities and major equipment. *(Describe major changes in facilities and major equipment added in the past 5 years.)*

We have not purchased or otherwise received any new facilities or major equipment in the last five years.

B. Academic and administrative efficiencies. *(In the past 5 years, what strategies has the program used to achieve greater academic and administrative efficiencies?)*

The ESGP did not have a Director from January-August 2002. In August, Dr. Will Focht assumed the position and was the first Director to be paid by the ESGP itself. He is the first of the six ESGP Directors who is a graduate of the program. Several changes in the program have been made since August 2002.

In 2002, the ESGP has developed three standing committees, which have greatly improved the efficiency of the program. The Admissions and Retention Committee has raised student admission standards, streamlined application criteria, screened and approved admission applications, monitored student progress, and reviewed student files if problems are discovered. The Curriculum Committee assisted in the creation and review of degree specializations and ENVR courses, identified core courses, and nominated courses for offer at the Stillwater and Tulsa campuses. The Awards Committee established criteria for environmental awards such as the green awards for sustainability, faculty research and teaching awards, alumni accomplishment award, staff and student service awards, and an ES student research award. Members of these three standing committees comprise the Steering Council. The Council is responsible for providing overall guidance of the program and approval of proposals issued by its committees. Council members are elected by their peers in their colleges to two-year terms. This adds legitimacy to both the Council and the program.

Specific changes made to the ESGP rules and procedures since 2002 that increase the efficiency and quality of the program are listed below.

Admission Criteria:

- A fundamental knowledge of chemistry, biology and math is a prerequisite for admission
- Principles of ecology is a mandatory course requirement
- GRE scores are required of all student applicants

Curriculum:

- ENVR 5300 and ENVR 5400 was combined into a single course (ENVR 5300)

Student Progress Monitoring:

- Each May, all students must participate in an annual review by their committees to review their progress; the results of these reviews are transmitted to the Director for his review and possible action

Exit Interviews:

- All students must participate in an exit interview with the Director before they are cleared for graduation in order to obtain suggestions for program improvement and to encourage their support of the program after graduation

Research:

- All PhD students must successfully pass both a written and oral qualifying exam at the end of their coursework
- All PhD students must successfully orally defend a dissertation prospectus before beginning their dissertation research
- All MS students must orally defend their written theses, reports, or creative components
- All students must submit their research products to the Program Coordinator in both hard copy and electronic forms

- MS committees must consist of 3 faculty members from at least two departments
- PhD committees must consist of 4 faculty members from at least two departments and from two faculty groups
- Students have one semester to find a new advisor if the previous advisor ceases to continue in that role

C. External funding. If applicable, complete Appendix A External Grants, Contracts, and Gifts Awarded to Program Faculty for the past 5 years. (*Describe the changes in external funding during the past 5 years.*)

Director Will Focht received a \$5000 research grant from the National Council for Science and the Environment (NCSE) to conduct a national study of environmental program curricula. The results of this study have been presented at conferences in Vail, CO (Council of Environmental Deans and Directors, CEDD), Portland, OR (NSF Project Kaleidoscope), Poughkeepsie, NY (Hudson Valley Environmental Consortium), Washington, DC (NCSE), Warrenton, VA (CEDD), Seattle, WA (University of Washington), and Alexandria, VA (National Association of Environmental Professionals).

The ESGP received \$1000 gifts from TheGreenTeam, Inc. and Jim Esbenshade to support ESGP students in their pursuit of sustainability research. We are continuing to pursue additional gifts to support students from the private sector through our part-time employment of a development officer. (We have just received a \$3000 gift from Public Service Company of Oklahoma.)

CRITERION IV
Productivity

- A. Number of majors, student credit hours, and average time to graduation.** Attach a copy of the 5-Year Academic Ledger for the department. *(Briefly summarize changes in the number of majors, student credit hours generated, and average time to graduation during the past 5 years.)*

Being an interdisciplinary graduate program, we do not have a 5-year academic ledger. However, we can provide the following statistics based on records kept by the program.

We averaged 81 graduate students (34 masters and 47 doctoral) enrolled in the ESGP over the last five years. At the beginning of this 5-year reporting period, the ESGP had an enrollment of 78 (36 masters and 42 doctoral students). Enrollment dipped to 71 students in the fall of 2002. It has since risen to 98 (38 masters and 60 doctoral students) at the end of the reporting period. (Enrollment reached 106 in spring 2005.)

The following table presents a statistical compilation of ESGP productivity in 2004 in terms of students and credit hours and compares our productivity to the average departmental (n=22 departments) productivity in the College of Arts and Sciences (CAS) in 2004. This table shows that we exceeded the productivity of the CAS departmental average despite the relatively few resources that have been allocated to the program. This is especially true when weighting coefficients are applied to account for the increased resources required for higher level students (lower division undergrad =1, upper division undergrad = 3, masters = 6, doctoral = 12). The ESGP generates more than 7 times the number of weighted credit hours than the CAS departmental average (note that 89.9% of all credit hours taken by ESGP students are graduate hours compared to the CAS departmental average of 6.2%).

DEPT	NO. OF FACULTY (FTEs)	NO. OF MASTERS STUDENTS	NO. OF DOCTORAL STUDENTS	STUDENT/FACULTY RATIO	WEIGHTED STUDENT/FACULTY RATIO	MASTERS CREDIT HOURS	DOCTORAL CREDIT HOURS	TOTAL WEIGHTED CREDIT HOURS
ESGP	1.2	38	60	78.4	758.4	626	239	6901
CAS Avg.	25.1	26.0	13.8	7.9	28.1	430	165	926

The ESGP is highly efficient at turning enrolled students into graduates. Over the last five years, we have graduated 59 masters students and 29 doctoral students, an average of 11.8 masters and 5.8 doctoral students per year. The masters students completed their degrees in 7.8 semesters (about 2.5 years) on average, while the doctoral students averaged 12.6 semesters (slightly more than 4 calendar years) to complete their degree (note that MS and PhD students can take as long as 21 and 27 semesters, respectively, to complete their degrees). We believe that these figures represent outstanding success in an interdisciplinary program with limited resources. They prove that ES students are active in their degree pursuits, complete their degrees in a timely manner, and generate significant credit hours for the university.

- B. Faculty ratio and class size.** *(Briefly summarize changes in the student to faculty ratio and class size during the past 5 years. Provide a brief explanation of the future plans for the program related to student to faculty ratio and class size, the time frame required to accomplish these plans, and the budget implications of the plans.)*

The ESGP faculty ratio is shown in the table above. Being an interdisciplinary program, we do not have dedicated faculty. We do, however, contract the services of adjunct faculty to teach ENVR courses. Counting the 0.5 FTE appointment of the Director, we have at total of 1.2 FTE faculty devoted to teaching ENVR courses. Given the 98 students who were enrolled in our program at the end of the reporting period, we have a student to faculty ratio of 78.4, which is 10 times higher than the CAS departmental average of 7.9.

Over the last five years, we have taught 13 ENVR courses over 15 semesters totaling 82 offerings. The following table presents an accounting of each of these offerings. Our enrollments over the last five years have been healthy for a graduate program, averaging 11.4 students per course including independent study courses. The relatively low average course enrollments have occurred in independent study courses and courses that were used occasionally as readings courses. We have since created two courses designated as readings courses, which will raise the average number of students enrolled in purely lecture courses.

ENROLLMENT IN ENVR COURSES (SUMMER 1999 – SPRING 2004)

ENVR COURSE NO.	ENVR COURSE TITLE	AY 1999-2000			AY 2000-2001			AY 2001-2002			AY 2002-2003			AY 2003-2004			5-YEAR TOTAL	AVERAGE CLASS SIZE
		Sum	Fall	Spr	Sum	Fall	Spr	Sum	Fall	Spr	Sum	Fall	Spr	Sum	Fall	Spr		
5000	Thesis	10	11	8	10	10	4	7	5	5	3	6	3	4	6	6	98	6.5
5103	Industrial Ecology ¹					21 ²						19					40	20.0
5110	ES Advanced Topics ³										1		2	3	17	3	26	5.2
5200	Special Topics in ES ⁴	1	17	6		32	23		1	14			10		1	8	113	11.3
5300	Seminar in ES		34			18			27			11	11		10	8	119	17.0
5400	Env Problem Analysis	13		27			11			20 ⁵							71	17.8
5500/6500	Env Mgt Practicum	13						16			12				1 ⁶		42	10.5
5600	Env Mgt Internship ⁷		3	6	1	2	1	4	2	1					5	2	27	2.7
5703	Chemical Aspects I						14 ⁸									17	31	15.5
5713	Chemical Aspects II								25							15	40	20.0
6000	Dissertation	16	17	15	7	17	15	12	17	14	13	16	15	6	13	16	209	13.9
6200	Doctoral Seminar ⁹		9	9		6	9		2	4							39	6.5
6600	Advanced EM Internship ¹⁰										1			1			2	1.0
Semester Totals		53	91	71	18	106	77	39	79	58	30	52	41	20	66	56	857	11.4

¹ This is a new course title. Previously it was named Ecology for Environmental Scientists.

² Taught as ENVR 5200 (5103 was created later).

³ This course number was used as a readings course in AY 2002-2003 and summer and spring of AY 2003-2004.

⁴ This course number was also used as a readings course in low enrollment semesters in AY 1999-2000, 2001-2002, 2003-2004.

⁵ This course was not offered after spring 2002 due to budget cuts.

⁶ The practicum was taught as an independent course this semester even though only one student was enrolled; the student needed the course to graduate.

⁷ This is an independent study course.

⁸ Taught as ENVR 5200 (5703 was created later).

⁹ This course was not offered after spring 2002 due to budget cuts. It is intended only for doctoral students are preparing dissertation proposals and dissertations.

¹⁰ This course is an independent study course.

We would like to develop as many as 13 new ENVR courses that address the career demands of a profession moving toward environmental sustainability. We have recently requested funding to develop and teach new courses, such as those identified below (note that the course numbers do not yet exist).

- ENVR 5030 Readings in Environmental Science
- ENVR 5123 Human Stressors on the Environment
- ENVR 5413 Watershed Management
- ENVR 5423 Risk Perception and Communication
- ENVR 5433 Environmental Conflict Management
- ENVR 5803 Environmental Impact Assessment
- ENVR 5813 Environmental Site Assessment
- ENVR 5823 Pollution Prevention
- ENVR 5833 Human Toxicology for Environmental Scientists
- ENVR 5843 OSHA and the Work Environment
- ENVR 5903 Environmental Sustainability
- ENVR 6030 Advanced Readings in Environmental Science
- ENVR 6310 Advanced Topics in Environmental Management

C. 5-year average number of degrees conferred and majors. Refer to the OSRHE productivity spreadsheet. (*Compare the number of graduates and majors to the minimum productivity standards established by the Oklahoma State Regents for Higher Education*).

DEGREE	NUMBER OF DEGREES CONFERRED		MAJORS (HEADCOUNT) – FALL SEMESTER	
	OSRHE STANDARD	5-YEAR AVERAGE	OSRHE STANDARD	5-YEAR AVERAGE
Certificate	NA	NA	NA	NA
Baccalaureate	5	NA	12.5	NA
Masters	3	11.8	6.0	34
Doctoral	2	5.8	4.5	47

If the department has more than one degree program in a degree level (e.g., BS and BA), please list the number of degrees and headcount enrollment for each program separately.

If the five year average for any degree program does not meet State Regents' minimum productivity requirements for graduates and/or headcount enrollment provide a brief explanation of the future plans for the program that will enable it to meet the productivity requirements, the time frame required to accomplish these plans, and the budget implications for continuation of the program.

The table above proves that our number of degrees conferred and number of majors easily exceed the OSRHE standards.

CRITERION V
Quality

A. Program faculty qualifications

It is important to recognize that the ESGP, being an interdisciplinary program housed within the Graduate College, does not have its own faculty. Other than the 0.5 FTE Director, all courses taught in the program are taught by faculty in other departments or by retired or adjunct professors and instructors. Instructors that have taught ENVR lecture courses (which do not include thesis and dissertation hours or internship mentoring) over the last five years are listed in the table below. All have graduate degrees in environmentally related disciplines (Dr. Focht's and Dr. Ede's terminal degrees are in environmental science).

NAME	FACULTY STATUS (REGULAR OR ADJUNCT)	FACULTY FTE IN PROGRAM	DEGREES EARNED			RELATED WORK EXPERIENCE (YEARS)
			HIGHEST	HIGHEST IN TEACHING AREA	DEGREE SPECIALIZATION	
Will Focht	Assoc. Prof.	.50	Ph.D.	Ph.D.	Env Science	29 yrs
Marcia Bates	Adjunct	.25	Ph.D.	Ph.D.	Env Engineering	30 yrs
John Lambertson	Adjunct	.25	Ph.D.	Ph.D.	Env Sociology	20 yrs
Sarah Kimball	Adjunct	.25	Ph.D.	Ph.D.	Env Engineering	15 yrs
Kenneth Ede	Adjunct	.25	Ph.D.	Ph.D.	Env Science	11 yrs
Edwin Rossman	Adjunct	.06	Ph.D.	Ph.D.	Env Sociology	15 yrs
Dru Meadows	Adjunct	.06	M.S.	M.S.	Env Planning/ Architecture	19 yrs
Chuck Bell	Adjunct	.06	M.S.	M.S.	Env Planning/ Architecture	17 yrs

B. Evidence of regional / national reputation and ranking

We are aware of no rankings of environmental programs in the US. The total number of environmental programs is also not known since the field has not yet coalesced around a common identity. Estimates range from 1062 to 360, depending on the program names that are included along with “environmental science” and “environmental studies” (e.g., natural resources, conservation biology, environmental health, environmental management, environmental planning, environmental engineering, etc.). In fact, the lack of a common identity is one of the reasons why the Council of Environmental Deans and Directors (CEDD) was formed in 2001. CEDD is a nationwide organization of the leaders of interdisciplinary environmental programs across the US and is dedicated to advancing higher education in environmental science and studies. The membership of this group has grown to 130 in less than four years, which is quite an accomplishment given dues that have ranged as high as \$7500/year.

The ESGP Director, Dr. Will Focht, serves as a member of the Executive Board of CEDD and is co-chair of its Curriculum Committee. Our program is one of the oldest and largest among those represented on the Council. Dr. Focht has been invited to discuss interdisciplinary environmental curricula at several sites across the country including Oregon, Colorado, New York, Virginia, Washington, and the District of Columbia. This provides indirect evidence that our program is nationally recognized and is a leader in environmental curriculum design.

The program attracted students from at least 27 countries (England, Sweden, Finland, Ukraine, Kazakhstan, Russia, Croatia, China, Taiwan, Korea, India, Nepal, Syria, Jordan, Egypt, Pakistan, Bangladesh, Indonesia, Malaysia, Philippines, Nigeria, Congo, Mozambique, Columbia, Venezuela, Argentina, and Costa Rica) over the last five years. We have also attracted students from at least 20 states. This provides further evidence of its recognition beyond Oklahoma.

C. Scholarly activity. Complete Appendix B Record of Significant Scholarly, Artistic, and/or Creative Work for the past 5 years. (*Describe the changes in scholarly activity during the past 5 years.*)

Again, the ESGP does not have dedicated faculty. We rely instead on retired and adjunct teaching instructors. Most of our graduates go on to professional careers in environmental consulting, industry, government, non-government organizations, and K-12 education. Very few go into higher education. As

a result, our program has not emphasized research as much as knowledge acquisition and practical application. However, we are changing this focus for doctoral students to raise the importance of scholarly research. This is one reason why we have requested funding for fellowships and conference travel to attract high quality doctoral students. We also are soliciting fellowship support from the private sector. We have recently encouraged the Graduate College to provide credit directly to those departments whose faculty advise our ES students so that they will be more motivated to place our students on their research grants. Despite these handicaps, however, several of our students have published their research with their advisors. We estimate that about 1/3 of the doctoral students have authored or coauthored publications during the time that they were students at OSU.

To increase the level of recognition of environmental accomplishment, we initiated an annual environmental awards banquet two years ago, held each year during Earth Week (third week in April). We have recruited internationally recognized keynote speakers for these events, including John Cronin, Director of the Pace University Academy for the Environment in New York and coauthor (with Robert Kennedy) of *The Riverkeepers*; Miles Tolbert, Secretary of the Environment in Oklahoma and Harvard and Stanford-trained lawyer and scholar; and Dr. David Orr, an internationally recognized author and lecturer in environmental studies from Oberlin College who will speak at this year's banquet. We have also sponsored external speakers to educate our students about career opportunities such as Dr. Matt Tueth, assistant professor at Aquinas College in Minnesota; Dr. Thomas Alexander, President of Alexander Consulting; Ken Bosma, Senior Project Manager with E2M Consulting; Ed Fite, Executive Director of the Oklahoma Scenic Rivers Commission; and Teresa Randall, instructor at Oklahoma City Community College. We have attracted more than 100 attendees at each of the first two banquets, including VIPs from the Oklahoma Department of Environmental Quality, the Oklahoma Water Resources Board, the Oklahoma Conservation Commission, the Oklahoma Wildlife Federation, the Environmental Federation of Oklahoma, and leaders of several private sector organizations. The banquet gives us an opportunity to recognize the contributions of students, alumni, faculty, and the private sector with awards such as outstanding research award for students, outstanding teaching and research awards for faculty, and sustainability fellowships for students with money donated from outside sources.

Two environmental faculty members in other departments have received awards for excellence in environmental teaching: James Lawler (Political Science) and Lowell Caneday (Leisure Science). Two others received awards for excellence in environmental research: Dan Storm (Biosystems and Agriculture Engineering) and Richard Marston (School of Geology). One ES student won a university outstanding doctoral research award (Monty Bruner in 2002). Another won the award for the best student research presentation at the annual research week competition (Ekaterina Ermilova in 2003). Two of our students won awards for outstanding graduate research in political science (Mike Langston in 2001 and 2002 and Matt Albright in 2004) and another won awards for outstanding teaching in political science (John Wood 2002 and 2003). Another ES student won the Marston Scholarship for Graduate Studies in Geomorphology and Environmental Geology (Dale Splinter 2003).

To ensure that we have a leading program that can successfully place our graduates into rewarding environmental careers, we have established an external Environmental Programs Advisory Board that helps us anticipate changes in the environmental profession, provides suggestions regarding curriculum, identifies current and future employment opportunities, and serves as a resource for development. We have twenty members on our board that are made up of Chief Executive Officers, Chief Operating Officers, and other leaders of private sector enterprises with a stake in the success of our program. We are also working with this board to secure funding for an endowed chair, graduate fellowships, and travel stipends.

- D. Assessment of student achievement of expected learning outcomes for each degree program (*this information should be available in your annual assessment reports*). *Select 3-5 key expected learning outcomes for each degree program. Identify the primary method used to assess student achievement of the selected outcomes. Please indicate the year(s) the assessment was conducted, the number of program graduates that year, and the number of students assessed.*

There exists no standardized professional certification for environmental science. Therefore, no commonly accepted exam or set of evaluation criteria can be used to assess competence. Moreover, since our program has no dedicated faculty and since the environmental field is so broad and its boundaries not clearly defined, we have not developed a standard examination for our students. Nevertheless, the following mechanisms have been developed to assess student competence.

Degree Program: MS in Environmental Science

KEY EXPECTED LEARNING OUTCOME	METHOD USED TO ASSESS THIS OUTCOME	YEARS THIS ASSESSMENT CONDUCTED	NO. OF GRADS/ NUMBER ASSESSED
1. Demonstrated ability to conduct environmental research and report research findings (this applies to all non-environmental management students)	Thesis or report defenses	1999-2004	44/47
2. Demonstrated ability to apply interdisciplinary knowledge and skills in managing environmental problems (this applies only to those students specializing in environmental management)	Completion and defenses of environmental internships at outside organizations	1999-2004	15/15

Degree Program: Ph.D. in Environmental Science

KEY EXPECTED LEARNING OUTCOME	METHOD USED TO ASSESS THIS OUTCOME	YEARS THIS ASSESSMENT CONDUCTED	NO. OF GRADS / NO. ASSESSED
1. Demonstrated interdisciplinary understanding of interactions between human and natural systems	Qualifying exams	1999-2004	29/31
2. Demonstrated intellectual skills (analysis, systems understanding, synthesis, critical thinking) and communication skills (oral and written)	Qualifying exams	1999-2004	29/31
3. Demonstrated ability to conduct independent environmental research and report findings	Dissertation defenses	1999-2004	29/29
4. Demonstrated ability to apply interdisciplinary knowledge and skills in managing environmental problems (this applies only to those students specializing in environmental management)	Completion and defense of internships at outside organizations	1999-2004	3/3

- D. Overview of results from program outcomes assessment (this information should be available in your annual assessment reports). For each key expected outcome, summarize results of assessment and describe how results have been interpreted relative to that outcome. *(To what extent are students achieving each expected outcome? What do assessment results indicate are curricular strengths or areas for improvement/program development?)*

The results of the annual assessment reports demonstrate that 100% of the graduate respondents judged their preparation for an environmental career in our program as adequate (very good = 60% and good = 40%). Only two doctoral students (out of 31) did not pass their qualifying exams and therefore left the program. Only three masters students (out of 47) failed to satisfactorily defend their thesis research and left the program.

- E. Feedback from program alumni/documentated achievements of program graduates. *(Describe achievements of program graduates obtained from other sources such as department-sponsored alumni surveys, alumni advisory boards, professional societies, etc. Summarize alumni survey results for the degree program, including, if available, information on employment and continued education of program graduates and graduates perceptions of program quality).*

Our assessment has lead to the formation of the ES Alumni Association. This association was instituted last year to provide direction and guidance to the program. The members include both PhD and MS graduates who want to keep the program strong. The association is also trying to endow an alumni award that is given at our annual environmental awards banquet.

- F. Other Program Evaluations. *(Comment on the results of any outside reviews of the program or any institutional reviews within the last 5 years.)*

We have not had an outside review since 1994. However, we have requested funds to compensate three outside reviewers to complete a review in 2005.

CRITERION VI
Program Demand/Need

A. Occupation Manpower Demand *(if applicable)*

1. Advisory Committee Membership

Our external advisory committee (EPAB) is composed of 20 CEOs and COOs of companies from across Oklahoma. All agree that an increased supply of environmental professionals who can integrate environmental policy, law, economics, ecology, management, and statistics is essential to the continued growth and development of the social and economic health of Oklahoma.

2. Advisory Committee Recommendations

The advisory committee recommends that we strengthen our focus on sustainability and responsible stewardship of natural resources as we seek to improve the economy and social well-being of Oklahomans. They support our efforts to increase our course offerings, obtain graduate research fellowships, increase internships, endow a chair in the ES program, and increase our budget to support students. They are willing to play a role in making these goals reality.

3. School Response to Recommendations

The new Graduate College Dean supports our goals and is actively advocating resource allocation increases. We hope to receive significant budget increases in the next and subsequent fiscal years. The administration also supports our efforts to raise private sector funds to improve our program.

4. Other sources and documents indicating demand

The Council of Environmental Deans and Directors is in the process of generating a report on the environmental workforce. This report will demonstrate the large and growing demand for environmental program graduates.

B Societal Needs for the Program

As social pressures grow to exploit the natural environment for goods and services to increase human quality of life, it is increasingly important to find ways to do so sustainably. This requires a comprehensive understanding of human and natural systems and their interdependency. Over the last several years, discussions about the need for growth policy based on sustainability principles have grown and spread among policymaking institutions at all levels of government. Solutions to sustainable development problems require an interdisciplinary understanding of the sustainable conversion of natural capital, economic capital, social capital, human capital, and political capital aimed at increasing quality of life. Environmental science is aimed precisely at these problems. This need is reflected in the rapid growth of environmental programs nationally over the last 40 years and especially over the last 15 years. Our program is among the oldest of these, approaching its 28th year. We are the only independent (of colleges) interdisciplinary graduate environmental science program in the State.

C Graduate student applications and enrollment changes. Refer to the spreadsheet that lists the number of graduate student applications, acceptances, enrollments, and graduates for the past 3 years. *(Comment on the number of applications, acceptances, and enrollments, and changes over time. For example, if applications are relatively high but the department accepts few students, why are most students denied admission? If acceptances are relatively high, but enrollments are low, why do admitted students not enroll? Is the rate of graduations consistent with the enrollment number and the expected time to earn the degree? Then provide a brief explanation of the future plans for the program that will enable it to improve numbers of concern, the time frame required to accomplish these plans, and the budget implications for these plans.)*

The following table presents statistics relating to matriculation of students into and through our program.

ACADEMIC YEAR	INFORMATION REQUESTS	APPLIED	NOT ADMITTED			ADMITTED		NO SHOWS		DROPOUTS		GRADUATES	
			Reason	MS	PhD	MS	PhD	MS	PhD	MS	PhD	MS	PhD
1999-2000	441	42	No advisor	10	9	10	11	1	3	8	3	20	9
			Admission committee reject	1	0								
			Incomplete file	1	0								
2000-2001	426	55	No advisor	6	1	16	7	4	3	7	3	12	4
			Admission committee reject	1	0								
			Incomplete file	19	5								
2001-2002	437	45	No advisor	6	4	16	4	1	0	11	3	12	1
			Incomplete file	10	3								
			Transfer to other dept.	2	0								
2002-2003	291	45	No advisor	4	0	20	7	3	2	9	3	6	8
			Admission committee reject	2	0								
			Incomplete file	7	3								
			Transfer to other dept.	2	0								
2003-2004	124	44	No advisor	1	1	14	26	2	2	0	2	9	7
			Admission committee reject	0	1								
			Rejected advisor	0	1								
5-Year Total	1719	231	All reasons	72	28	76	55	11	10	35	14	59	29

Requests are down due to cessation of mailing of 400 posters across the country and cessation of paid website postings, such as Petersen's and GradSchools.com.

Applications were consistent but the percentages increased from about 10% for the first three years to 15% in year four to 30% in year 5. This is due to more aggressive telephone and email follow-ups. Over five years, our average acceptance rate is 57%.

Applicants not admitted were consistent across years except for last year when only 1 MS was rejected and the last two years when only 3 PhDs were rejected each year. Most rejects are due to failure to complete applications or to failure to find an advisor. About 50% of all applicants were not admitted in the first three years, 40% in year 4, and only 10% in year 5. The increasing percentage of admissions is due to our ability to help students complete their applications and find advisors. We also note that the quality of applicants is improving, making it easier to find advisors. The year 5 result is an anomaly due to admission of the NASA environmental education cohort.

Admitted students were up last year for PhDs due to admission of a cohort program for NASA.

No shows were consistent and low. The chief reason for this is lack of funding support.

Dropouts were consistent and low except for last year when only two dropouts occurred. The dropout rate was about 50% over the first four years of this period due to lack of financial support, social support with fellow students and faculty, and unenthusiastic leadership. It is now 5%.

Graduates were consistent except for a large MS class in 1999-2000 due to an unusual backlog of students and our new policy regard tuition waiver renewals (MS for 2 years and PhD for 3 years). The relatively low number of MS graduates in 2002-2003 was probably due to the large number of graduates and dropouts

during the previous three years (n=70).

CRITERION VII
Program Duplication

- A. Identify other degree programs at OSU with similar titles or functions (*include degree programs in the department if the department has more than one degree program at a degree level (e.g., BS and BA)*).

There are no other graduate environmental programs on campus that are interdisciplinary and incorporate natural and social sciences with education and engineering in an exploration of the mutual dependency of natural and human systems. Our students are offered a unique opportunity to integrate knowledge and skills from several disciplines to construct a program geared to meeting their individual career goals.

Discussions have occurred however, especially in the Colleges of Arts and Sciences and Agricultural Sciences and Natural Resources, about establishing a new “conservation science” graduate degree program. We have opposed this initiative as being duplicative of our environmental science program. As far as we know, this initiative is no longer being actively pursued.

Additional discussions have occurred within the College of Arts and Sciences about the creation of an undergraduate certificate program and perhaps later an undergraduate degree program in environmental studies. As long as there is no proposal for a graduate certificate or degree program in environmental studies, we are not concerned about program duplication.

- B. For similar programs, describe how each degree program fulfills unique student needs. (*A program may be unique because of the subject matter treated, the students served, the educational methods employed, the effect of the achievements of the program on other institutions or agencies, etc.*)

Existing graduate programs in environmental engineering, natural resource/agricultural sciences, human environmental sciences, and natural sciences in other colleges are not duplicative of our program. The ESGP does not claim jurisdiction over all programs on campus that involve the study of the environment. What we do claim as our unique domain is the interdisciplinary study of the natural environment and human relationships with it. No other program claims this domain.

SUMMARY AND RECOMMENDATIONS

Note-information for this section may come from a variety of sources and should include information about program strengths and areas for improvement that have been described in the program's outcomes assessment reports.

A. Strengths

The strength of the ESGP lies in its interdisciplinary focus and its location within the Graduate College, which safeguards its independence from the limited disciplinary foci of colleges and departments. The program also benefits from the support it has enjoyed from faculty members who donate their time and efforts to the ES Steering Council and its committees as well as to the mentorship of ES students. The program very much appreciates the social capital and good will that is generated between us and these faculty members. The program is also indebted to the patience and continued dedication of students, particularly those who are active in the Society of Environmental Scientists that represents ES students, for their participation, enthusiasm, and support. Next, the program has benefited from the newly established external advisory board (EPAB), which has provided advice and financial support to the program. Moreover, recent standardization and publication of ESGP policies and procedures has gone a long way to clearing up chronic disputes and confusions that had plagued the program previously. Finally, we look forward to the guidance and support of the new Graduate College Dean who has expressed support for interdisciplinary programs and is working to find additional resources that will help us continue to improve.

B. Areas for Improvement and Recommendations for Action

Several opportunities exist for continued improvement of the ESGP:

1. Increase administrative resources to accommodate a growing program (we have requested the funding of a clerical position to relieve the coordinator from these duties so that she can concentrate more on student relations and recruiting)
2. Increase funding of recruitment activities (we have requested funds to restore our efforts to produce and distribute posters, with reply cards, which in the past has tripled the number of inquiries; we have also requested funds to allow us to subscribe to internet referral services such as gradschoools.com and to compensate faculty and students for extra travel expenses associated with conference travel if they help recruit students)
3. Fund doctoral student fellowships (we have requested funds to pay exceptional doctoral students for their first year in our program, which will help us to compete for the best students)
4. Pay for an external program review (we have requested funds to allow us to pay for an external program review by three members of CEDD; we have not had an external review since 1994)
5. Secure permanent funding of membership in CEDD (we have relied upon donations from the Office of the Vice President for Research to pay CEDD dues; the ESGP should be given money in its budget to pay for these dues and continue its affiliation with the National Council for Science and the Environment)
6. Improve relations with ESGP alumni (we recently formed an ES alumni association and elected officers; we are in the process of creating a newsletter and website to facilitate relations with alumni; we hope that this association will increase their support of our program)
7. Improve the ESGP website, newsletters, and other outreach activities to support recruitment and outreach activities (we plan to use the recently hired Environmental Institute outreach coordinator to support these efforts)
8. Move from a primarily multidisciplinary curriculum (one comprised chiefly of single-discipline courses) to an interdisciplinary curriculum by developing more interdisciplinary courses and specializations (we recently requested funds to compensate faculty for the development of additional interdisciplinary ENVR courses that can improve our curriculum and allow the creation of additional specializations; this will also help us recruit more students)
9. Increase standardization of doctoral qualifying exams to ensure that adequate knowledge of human-nature interactions are obtained via ENVR courses

10. **Improve monitoring and mentoring of student progress (we have recently instituted an annual review of student progress by the students' advisors; we plan to require that students meet with their entire committees each year and to communicate the results of these meetings to the Director)**
11. **Improve the utility of student, faculty, and career databases (we created these databases two years ago but the loss of Environmental Institute funding had prevented us from bringing them to full operational capacity until recently; such databases will help student prepare plans of study and find advisors, help faculty identify students for employment on grants, help employers and internship sponsors find attractive candidates, and help students identify potential career opportunities)**
12. **Work to build political support of the ESGP from the university to protect it against threats from the establishment of competing and overlapping programs such as environmental studies and conservation science**
13. **Improve our fundraising activities (we have requested funding of a part-time development officer to help in this regard)**
14. **Move in an appropriate way and with appropriate patience toward the conversion of our interdisciplinary program to an interdisciplinary department, complete with interdisciplinary faculty, perhaps within a new college of interdisciplinary studies (this will allow us to offer a truly exceptional degree program and join other interdisciplinary programs on campus)**

C. Five-Year Goals for the Program

1. **Triple the number of ENVR lecture and readings courses offered on a rotating basis from 7 (5103, 5110, 5200, 5303, 5500, 5703, and 5713) to 21 (these seven plus 5030, 5123, 5414, 5423, 5433, 5403, 5803, 5813, 5823, 5833, 5903, 6030, 6200, 6310), which will require compensation of faculty**
2. **Double the number of specializations from five (environmental management, environmental disaster management, water and watershed management, environmental education, and environmental toxicology and risk assessment) to ten (these five plus environmental policy, environmental conflict management, environmental sustainability, environmental planning, and environmental conservation)**
3. **Increase enrollment from 98 to 130 (including an increase from 30 to 45 in Tulsa)**
4. **Establish five \$15K doctoral fellowships**
5. **Establish eight \$500 travel stipends**
6. **Establish better relations with alumni and obtain their sponsorship of an alumni accomplishment award that will benefit current students**
7. **Raise \$250K in private donations to benefit the ESGP**
8. **Attempt to raise \$1.2M to endow a chair in environmental science**

APPENDIX A
EXTERNAL GRANTS, CONTRACTS, AND GIFTS AWARDED TO PROGRAM FACULTY

EXTERNAL FUNDS			DOLLAR AMOUNTS				
NAME OF GRANT, CONTRACT, OR GIFT	PRINCIPAL INVESTIGATOR	SOURCE OF FUNDS	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004
Environmental Program Curriculum Study	Will Focht	National Council for Science and the Environment (grant)				\$5000	
Sustainability Fellowship	Will Focht	TheGreenTeam (gift)				\$1000	
Sustainability Fellowship	Will Focht	Jim Esbenshade (gift)				\$1000	

As an interdisciplinary program with no faculty, we are not in a position to compete for grants and contracts. The Director has obtained one small grant from the NCSE and plans to submit additional proposals in the coming years. The gifts are a direct result of our recent formation of the Environmental Programs Advisory Board and the environmental awards banquet, which were both started in 2003. We anticipate additional gifts in the coming years.

APPENDIX B
 RECORD OF SIGNIFICANT SCHOLARLY, ARTISTIC, AND/OR CREATIVE WORK

Name and Type of Scholarly, Artistic and/or Creative Work	Program Faculty	Year Completed (1999-2005)
(see discussion under Criterion IV(C) relating to awards and speakers)		

Again, we are an interdisciplinary program with no dedicated faculty. The research and other creative endeavors that are pursued by faculty who teach in our program are credited to their home departments. Criterion IV(C), we listed several awards that our faculty and students have received, and important speakers that we have recruited to deliver presentations to our students and faculty.