

Environmental Programs

College of Geosciences Strategic Plan 2015-2019

Vision

Environmental Programs in Geosciences (hereafter ENVP, or Programs) will be the leading provider of environmental education at Texas A&M University within the five-year span of this plan, and the leading interdisciplinary undergraduate environmental program based in the geosciences.

Mission

Mobilize the expertise in Atmospheric Sciences, Geology, Oceanography, and Physical and Human Geography in the College of Geosciences to deliver interdisciplinary undergraduate environmental education opportunities that prepare students for the environmental workforce and for appropriate graduate school opportunities.

Values

We will continue to foster a culture of scholarly excellence while honoring the principles of academic freedom. We recognize that, as a state university, we exist to serve the people of the State of Texas and have the responsibility to try to improve the lives and environment of all Texans. We also recognize the diversity of the people who may wish to work and study within the Programs, and will not discriminate in any form.

Critical Issues

Education

- How to increase availability of GEOS 405 and further diversify its structure to provide opportunities for study abroad. We have been running near capacity, which often limits availability only to those in their final semester prior to graduation.
- How to increase offerings and availability of Geosciences courses with significant policy content. This situation has recently worsened as we have not been able to offer GEOS 430 – Science and Policy Making and GEOS 444 – Science and Politics of Climate Change consistently fills to (or past) capacity.
- How to offer new courses or modify current ones to offer more hands-on, practical, and career-oriented education. Our students frequently identify this deficiency as negatively impacting their post-graduation job opportunities.
- How to advertise and nurture the recently approved 3+2 joint program with Oceanography to ensure it succeeds. This program is expected to increase i) interest

and enrollment in ENGS, ii) student motivation and GPAs to meet the entry requirements, and iii) SCHs, and especially WSCHs, as a new pool of self-funded M.S.-level students take courses in the College.

- How to increase participation in our minors, which increase enrollment in Geosciences courses and may also increase the number of change of majors into ENVP or other GEOS departments.
- How to tailor student coursework and preparation for specific careers or specific graduate/professional programs. The flexibility offered in ENGS and ENST is among its greatest appeals to many students, yet this flexibility often leaves graduates without the foundation required for many entry-level jobs and graduate programs.

Human Capital

- How to provide more opportunity for students to participate in internships and how to compel them to take advantage of that opportunity.
- How to encourage faculty to engage more ENST and ENGS students in undergraduate research.
- How to better engage faculty and academic advisors to ensure course offerings and capacity are aligned with the needs of the ENST and ENGS students.
- How to use the diverse expertise available among the college faculty to effectively advise our diverse student population.
- How to reduce the workload on the program coordinator to free up time to initiate new efforts.

Goals

1. Have combined ENGS/ENST enrollment of 5 – 25% above 2014 while increasing the percentage of those students who enter the program because of their excitement for the field and decreasing that of those students who enter because of their lack of excitement for any other. Progress to be assessed using cumulative GPA while in major.
2. Have at least 80% of all students participate in i) study abroad, ii) an internship, or iii) undergraduate research before graduation. Self-reported participation among 2013 graduates was about 60%.
3. Have at least 20% of all graduates enter directly into graduate or professional school. The specialization offered through graduate study complements the broad foundation provided by of our degrees, which alone can limit career opportunities.
4. Enhance formal and informal ties with Program alumni and regional employers to improve student preparation and Program curricula.
5. Develop at least one 3+2 program similar to the recently approved between ENGS and OCNIG. This would likely again be within the College, but partnerships with e.g. Environmental and Occupational Health or Civil Engineering might also be pursued.
6. Improve the quality of the ENST degree program, responding to consensus reports, exit survey, and Academic Program Review (Oct. 2015).
7. Increase donor support for ENGS and ENST through scholarships and endowed chairs.

8. Increase recruitment of faculty to teach the capstone course, GEOS 405, and other critical curricula in the College

Action Plan

Short term (by August 31)

- Develop structure and prepare initial content for page on the ENVP website designed to encourage participation in high-impact educational practices (Goal 2).
- Develop syllabus for planned junior-level cornerstone course that would be directed at career and graduate school preparation and planning with partial reliance on former students who are environmental professionals (Goals 2, 4).
- Develop an informal external advisory council by inviting environmental professionals as career panelists twice per year (Goal 4).
- Implement a development strategy focusing on strategic priorities (Goal 7)

Anticipated Mid term (1 year out)

- Identify most feasible 3+2 program and work to develop proposal and communicate plan to impacted faculty (Goals 1, 3, 5).
- Offer junior-level cornerstone course (Goals 2, 4)
- Identify and target for recruitment i) high schools offering AP Environmental Science and ii) community colleges offering GEOS 105 equivalent (Goal 1)
- Implement themes for the ENST degree effective Fall 2017 (Goal 6)
- Offer new senior-level course, “Regulation and Compliance for Geoscientists” (Goal 6)
- Offer local stakeholder-oriented section of capstone course (GEOS 405) (Goals 3, 6)
- Renew faculty engagement by Director participation in hiring process in academic departments (Goal 8)

Long term (3 years out)

- Submit 3+2 program proposal for approval (Goals 1, 3, 5)
- Evaluate impact of ENST themes, cornerstone course, and “Regulation and Compliance” course (Goal 6)
- Recruit a permanent Professor of Practice to teach a course in environmental regulation and compliance (Goals 4, 6)

Approved by EPAC, 19 Feb. 2016

Submitted by Director (Christian Brannstrom), 25 Feb. 2016