Environmental Curriculum Study Group
DRAFT EXECUTIVE SUMMARY
Prepared by Environmental Curriculum Study Group
March 30, 2006

Background: In April 2005 the Environmental Curriculum Study Group was convened to address the issue of strengthening program offerings and program enrollments in the general area of Environmental Sciences in the College of Agricultural Sciences. In addition to considering such traditionally "environmental" majors as Environmental Resource Management, the Committee was also charged with addressing the Agroecology (existing) major and the Plant Science and Ecology majors (proposed in the CAS 2005-2008 strategic plan).

Enrollments in CAS majors have declined from 3201 students in 1995 to 2100 in 2005. With the exception of 2004-2005 when enrollments held steady, enrollments have declined each year from 1995-2005. Enrollment in the Environmental Resources Management, Agroecology, and Forest Science undergraduate programs declined, a pattern consistent with the past 3-6 years in these programs. Interestingly, while the number of majors has decreased by 34% over the last decade, total course credits taught remained steady. In other words, while the number of majors has declined, student credit hour production has remained steady. As a faculty, we seek to find the appropriate balance of majors *and* students taught in and outside of our CAS majors. The specific "purpose" of the committee follows.

Purpose: Assess the College of Agricultural Sciences *Environmental and Related Life Sciences Programs* and identify recommended changes that will result in increased enrollment and student success.

During the course of the Committee's deliberations we pressed ourselves to identify key bottlenecks constraining undergraduate program success. Those discussions yielded the following list of essential ingredients of successful undergraduate programs: a core set of faculty serving as Program "Champions" willing to actively support the program; a core set of faculty willing to teach program-specific courses; institutional support (faculty evaluation); physical space allocated to the program (coordinated suite of offices, lounge, nearby classrooms); a minimum number of students to maintain program viability.

The Environmental Curriculum Study Group makes the following recommendations to enhance undergraduate programs in the College of Agricultural Sciences. The Committee can't overstate the ***interconnectedness*** of the recommendations. Restructuring program administration or creating new programs alone will not address the ***Purpose*** the Committee was asked to address. Rather, changes outlined below must occur in a coordinated fashion so as to put the right programs in place, and put them in place with an administrative model that insures their success.

Recommendation 1

Restructure Administration of Interdepartmental Majors in the College of Agricultural Sciences

Create the position of Program Director (coordinates and executes an interdepartmental undergraduate program) to oversee each interdepartmental program. Each interdepartmental major shall have an active Advisory Committee comprised of one Program Coordinator from each department participating in the interdepartmental major. The Program Director, with input from the Advisory Committee, will:

- collaborate with departments to provide necessary courses and advocate for faculty to cover critical areas in the program;
- coordinate student recruitment and retention, in collaboration with the CAS Office of Undergraduate Education;
- work closely with Core Faculty and Program Champions to offer special programs to enhance the student experience;
- allocate financial resources to enable program success;
- provide input to the appropriate administrator addressing individual faculty contributions to the interdepartmental program;
- provide financial incentives for faculty involvement in interdepartmental programs in the environmental sciences and/or plant sciences. Incentives should be provided to the Program Director (e.g., summer salary support, discretion over program resources to enable program success, release time from teaching in the home department) and faculty offering classes (e.g., funds for new course development, faculty release time from teaching in the home department).

Recommendation 2

Charge the Environment and Natural Resource Institute (ENRI) – working in close collaboration with the CAS Office of Undergraduate Education – to strengthen coordination between and improve visibility of environmentally-oriented undergraduate majors programs in the College. Further, place the Environmental Resource Management undergraduate program and the Ecology program (if formed) under the administrative oversight of the ENRI.

- ENRI would serve as the administrative home (umbrella) for the Environmental Resource Management program and Ecology (if formed). ENRI would also serve as the gateway to environmental studies at Penn State and as such would promote such undergraduate programs as Environmental Soil Science; and Community, Environment, and Development. ENRI would also be the appropriate home for the Sustainable Agriculture minor (Committee supports its formation).
- Provide ENRI with resources to serve to coordinate across environmental undergraduate degree programs and improve visibility of the affiliated programs.
- Strongly encourage ENRI to work collaboratively with the CAS departments to provide undergraduate opportunities focusing on the environment and natural resources.

Recommendation 3

Establish a new inter-college undergraduate major in Ecology, with faculty from the CAS and Eberly College of Science

- Broaden Recommendation 1 to be implemented across Colleges.
- ENRI would serve as the administrative home for this interdisciplinary undergraduate major.
- The Entomology Department and the School of Forest Resources have been assessing the potential of creating an undergraduate major in Ecology. Those two units would work collaboratively with interested faculty in the Eberly College of Science to design, teach and mentor students in this program.

Recommendation 4

Strengthen the Agroecology Major

- Implement Recommendation 1 above.
- Bring the course requirements for the Integrated Crop Production Option in line with those for the Horticultural Production Option in the Horticulture undergraduate major.

Recommendation 5

Establish a new inter-college Plant Science undergraduate major, with faculty from the CAS and Eberly College of Science

- The CAS Strategic Plan calls for the creation of such an undergraduate program and the Environmental Curriculum Study Group agrees.
- The Program would be inter-college focusing on molecular and physiological basis of plant growth. Many new faculty in both colleges have been hired over the past five years. Establishing a program like that offered at the University of Minnesota (inter-college, in-depth plant physiology program) would highlight the potential for undergraduate coursework and research experience in this growing field.
- The Plant Science Major would be administered out of one department in CAS (Entomology, Crop and Soil Science, or Horticulture) and the Biology Department in Eberly College of Science.

Recommendation 6

Change the name of the College to reflect the joint focus on Agriculture and Environmental Sciences. The Environmental Curriculum Study Group discussed a number of possible names for the College. The Committee unanimously supports a name change to one that highlights work in agricultural and environmental sciences.