UNIVERSITY OF ILLINOIS AT SPRINGFIELD
CAMPUS SENATE AY 2007/2008
RESOLUTION 37-11

Transfer of Risk Assessment and
Emergency Preparedness and Homeland Security Certificates from the
Department of Environmental Studies to the Department of Public Health

WHEREAS, the Department of Environmental Studies seeks to streamline its
curriculum; and

WHEREAS, the Risk Assessment and Emergency Preparedness and Homeland Security
Certificates have been transferred from the Department of Environmental Studies to
the Department of Public Health;

THEREFORE BE IT RESOLVED that the University of Illinois at Springfield
Campus Senate approve the transfer of Risk Assessment and Emergency
Preparedness and Homeland Security certificates from the Department of
Environmental Studies to the Department of Public Health.
The Department of Environmental Studies (ENS) seeks to refocus the existing M.S. degree in General Environmental Sciences and reduce the total number of M.S. options offered from 2 to 1, by removing the Risk Sciences option from the ENS M.S. curriculum, and transferring the Risk Assessment certificate and Emergency Preparedness and Homeland Security certificate to the Department of Public Health. The discussion below addresses the integrity of the new curriculum for the M.S. degree in General Environmental Sciences, the rationale for the proposed curricular change, and an analysis of potential impacts due to the removal of Risk Sciences option (and the two graduate certificates) from the ENS curriculum.

Section 1. Integrity of New Curriculum for the M.S. Degree
In this section we address the current state of environmental studies as a discipline, common curriculum components at other educational institutions, and the relationship between risk science and environmental science.

Although precedents existed for environmental studies programs in schools of forestry and natural resources, colleges and universities did not begin to initiate free-standing programs in the field until the 1960s. Most of these new environmental studies programs were started by physical and life scientists who were concerned with toxicological effects of pesticides and other pollutants, prompted in part by Rachel Carson’s Silent Spring (1962), or by social scientists who were concerned with the emerging fields of environmental policy and law, prompted in part by the major environmental legislation passed in the 1960s and 1970s.¹ In response to the growing public concern for the environment, UIS, then

Sangamon State, in 1970 established the Environments and People Program (now ENS) to meet the educational needs of students who wished to pursue an interest in the relationship between human activity and environmental quality.

The purpose of Environmental Studies is to provide interdisciplinary training which integrates the social, humanistic and scientific disciplines that pertain to the environment. Ecology, the scientific study of interactions of organisms with one another and with the abiotic environment has become the cornerstone underlying the broad field of Environmental Studies. By the mid 1990s, the complexity of environmental problems led environmental managers to recognize the need for an integration of ecological, economic and social goals in a holistic approach. This recognition led to a new environmental management strategy dubbed ecosystem management. ENS acknowledged this important advance in the field and created the course Ecosystem Management in 2004.

Although toxicology, epidemiology and risk assessment were components of early environmental studies programs, these disciplines have, like environmental studies, grown and advanced considerably and are now generally encompassed in the burgeoning field of environmental health. With a focus on preventing disease and creating health-supportive environments (both indoor and outdoor), the core epistemological and methodological tenets of risk assessment sciences are more similar to traditions found in Public Health theory and practice than to current Environmental Studies pedagogy.²

Current environmental studies programs at institutions nation-wide focus curriculum in four major areas: 1) ecological, ecosystem and/or earth sciences, 2) land use and environmental planning, 3) sustainable development, and 4) environmental policy.

An internet search of programs titled environmental studies or environmental science confirmed these trends.³ Of the 106 environmental studies/science programs identified, only twenty (19%) continue to offer a concentration or option in Risk Science or Assessment. Six of these programs are located within a Public Health Department, and five of these programs are located within a merged department of Public Health and Environmental Studies/Science (Note: The Department of Environmental Health, Science, and Policy at the University of California, Irvine, is suspending its graduate applications for Fall 2007 due to the dissolution of its combined curriculum in environmental health and

³ Internet search based on programs listed in GradSchools.com last accessed Friday July 20, 2007. Accessible via: http://www.gradschools.com/programs/environmental_science.html
Thus, only nine Environmental Science/Studies Departments nation-wide offer a risk science or assessment option.

The current ENS M.S. degree offers two barely distinguishable options that are a hybrid of environmental science (e.g. ecology, ecosystem management, earth sciences) and environmental health (e.g. toxicology, epidemiology, risk assessment). Given the theoretical and practical advances in both environmental science and environmental health, the epistemological bases of these disciplines no longer substantially overlap. The current expertise of the ENS faculty, along with research/teaching opportunities presented by the Emiquon Field Station, allows us to offer a more focused M.S. degree that seeks to integrate ecological/ecosystem sciences and management policies. This new focus requires us to replace Environmental Toxicology with Ecosystem Management as one the concentration core courses. ENS views that the faculty expertise and mission of the Department of Public Health make it better equipped to offer a Master’s degree in environmental health.

Section 2. History of Curriculum and Rationale for Curricular Changes
ENS went through a major turn-over of faculty in 2003. Currently, there are 4 faculty members in ENS – one started in Fall 2003 and the other three joined the department in Fall 2006. From Fall 2003 to Spring 2006, ENS had only two full-time faculty members while at the same time offering 2 M.S. degree options and 3 M.A. concentrations. M.S. degrees include General Environmental Sciences and Risk Sciences options while M.A. degrees include concentrations in Environmental Policy, Planning, and Administration (renamed Environmental Planning and Management in Fall 2006), Natural Resources and Sustainable Development (renamed Sustainable Development and Policy in Fall 2006), and Environmental Humanities.

Despite the differences in names, the curricula between General Environmental Sciences and Risk Sciences options were hardly distinguishable from each other; such was also the case between Environmental Policy, Planning, and Administration and Natural Resources and Sustainable Development. In other words, it was difficult and unrealistic to expect a department with only two full-time faculty members to deliver a graduate program with a total of 5 options/concentrations. Hence, it has always been the goal of ENS to re-structure these similar options/concentrations to provide a distinct focus for each.

In order to get new hires, ENS had proposed to offer an online concentration (i.e., the Sloan Initiative) that mirrors one of the on-ground concentrations in Natural Resources and Sustainable Development. Consequently, ENS hired three new faculty members (one replacement and the other two due to the proposed online degree) to begin in Fall 2006. With the new faculty members on board and based on their expertise and background, ENS began to re-structure the curricula for the three concentrations within the M.A. degrees. As a result, we revised the M.A degree to reflect the current state of the discipline and now offer distinct concentrations which reflect the major nation-wide curriculum areas in environmental studies: Environmental Planning and Management and
Sustainable Development and Policy (see Section 1). In the same semester (i.e., Fall 2006), the campus senate passed the name changes and curricular alignments for the ENS M.A. concentrations. Our next step was to revisit and do the same for the M.S. degree options in General Environmental Sciences and Risk Sciences in Fall 2007. Ultimately, our goal is to offer graduate options/concentrations that are clearly distinguished from one another.

In April 2007, we learned from reading senate materials that the Department of Public Health (hereinafter MPH) was proposing a new Environmental Health concentration that would essentially parallel the current ENS M.S. degree options, in particular the Risk Sciences option. To avoid duplicating programs, ENS proposed to remove the Risk Sciences option from its curriculum and adjust the General Environmental Sciences option at the same time. On April 15 2007, the College Executive Committee of Public Affairs and Administration approved the curricular changes proposed by ENS (see below) to shift the focus of the General Environmental Sciences option to ecological and ecosystem sciences. Following College approval, changes in the electives for the General Environmental Sciences option were implemented. On April 27, Provost Berman approved ENS’s request to suspend admission of students into the Risk Sciences option effective Fall 2007. The campus senate approved the MPH’s new Environmental Health concentration with the understanding that ENS would be working through governance for the removal of the Risk Sciences option from its curriculum. We have also amended the 2008-09 catalog copy to reflect the changes in electives\textsuperscript{4} and direct students interested in pursuing risk sciences to contact MPH.

In short, to help UIS develop distinct and strong programs in ENS and MPH, the ENS department proposes curriculum changes to:

- Shift the ENS curriculum away from environmental health science and risk science by eliminating the Risk Science option and two graduate certificates in Risk Assessment and Emergency Preparedness and Homeland Security from the curriculum.
- Adjust the remaining ENS M.S. General Environmental Science option to have a stronger ecological science focus.

In addition, Dr. Sharron LaFollette, the faculty member who was leading the Risk Sciences areas (i.e., the option and the two certificates) of the ENS curriculum, requested re-assignment and became the chair of MPH in April 2007.

The proposed changes to the ENS curriculum are included in Appendices A-B and summarized below:

\textbf{1) Courses to be moved to MPH:}

\textsuperscript{4} Because of the May 1 deadline, we were only able to make the changes of the elective courses for the 2008-09 catalog copy.
Move environmental health science and risk science coursework to MPH. Consistent with the changes MPH proposed for its curriculum, change course ownership to MPH for the following ENS courses:

- ENS/PAC 450 Chemicals and the Citizen
- ENS 478 Crisis in Environmental Health
- ENS 486 Solid and Hazardous Waste
- ENS 449 Environmental Toxicology
- ENS 521 Environmental Risk Assessment
- ENS 522 Risk Assessment Air, Land, and Water
- ENS 523 Risk Practicum
- ENS 526 Risk Communication and Management

Remove ENS Cross-List from MPH owned courses:

- ENS 561 Foundations of Epidemiology
- ENS 562 Analytical Epidemiology
- ENS 563 Environmental and Occupational Health

2) Certificates to be moved to MPH:

- Risk Assessment Certificate
- Emergency Preparedness and Homeland Security Certificate

3) Revised ENS M.S. Degree:

- Eliminate the Risk Science option from the ENS Curriculum.
- Regarding General Environmental Sciences Option:
  - Delete ENS 449 Environmental Toxicology from its concentration core requirements.
  - Move ENS 542 Ecosystem Management from concentration electives to required concentration cores.

Section 3. Analysis of Potential Impacts

In this section, we address the issues of enrollment impacts, core course delivery, degree transition/advising, and accreditation by the National Environmental Health Science and Protection Accreditation Council (EHAC) for the Risk Sciences option.

1) No Significant Enrollment Impact

ENS does not anticipate any significant enrollment impact by eliminating the Risk Sciences option from its curriculum because compared to the other concentrations, the Risk Sciences option received relatively few applications and consequently admitted relatively few students per year between 2003 and 2006. Moreover, the risk sciences courses to be moved to MPH (see the list in Section 2) have also seen relatively low enrollment by ENS’s own graduate students. In particular, between 2003 and 2006, many of these courses had enrollments lower than 6 in any single semester. In the academic year 2005-06, ENS was not able to offer the risk science sequence because only one student had signed up for the first sequence course, ENS 521 Environmental Risk Assessment, which was then cancelled. In fact, ENS 521 was cross-listed with MPH. In
Spring 2006, the campus senate passed the curriculum for a graduate certificate in Environmental Health by MPH, in which ENS 521 Environmental Risk Assessment was listed as one of the required courses (along with ENS 449 Environmental Toxicology). In the same semester, the campus senate also passed the graduate certificate in Emergency Preparedness and Homeland Security, in which ENS 521 was also listed as one of the core course requirements (along with ENS 526 Risk Management and Communication). Listing the risk science courses in these new graduate certificates can potentially increase the enrollments for the courses. But the bottom line is that relatively few of ENS’s own graduate students take these courses.

ENS also does not anticipate any significant enrollment impact by eliminating the two graduate certificates in Risk Assessment and Emergency Preparedness and Homeland Security from its program. Between 2003 and 2006, one student in 2004 and three students in 2006 received the Risk Assessment certificate according to the data obtained from the Office of Institutional Research. In Fall 2006, the Emergency Preparedness and Homeland Security graduate certificate admitted its first 8 students. By Spring 2007, only two of those 8 students were still taking classes. Moreover, none of those enrolled in the Emergency Preparedness and Homeland Security certificate program is also an ENS degree seeking student.

In conclusion, by moving the Risk Sciences option and the two graduate certificates to MPH, ENS does not anticipate any significant impact on our overall program enrollment. Moreover, both college and campus level enrollments will not be affected whatsoever by the curricular changes proposed here by ENS since the risk science curriculum and the related graduate certificates still remain in the college.

2) No Impact on Core Course Delivery
The re-assignment of Dr. LaFollette to MPH does not impact the delivery of the common core courses required for all ENS graduate students because Dr. LaFollette did not teach any of these courses. Dr. LaFollette mostly taught risk sciences related courses for ENS.

3) Degree Transition/Advising
In April 2007, 30 ENS students admitted between 1995 and 2006 were listed under the Risk Sciences option. Of these 30 students, 8 of them dropped the program (4 of them started before 1998), 17 finished the coursework, 3 are close to finishing the coursework, and 2 have transferred to MPH starting Fall 2007. Of the 20 students who finished or are close to finishing the coursework, 13 of them have switched to the current ENS faculty members as their academic and thesis/project advisors. We have yet to hear from the remaining 7 students (6 of them were admitted before 2003). The risk sciences coursework proposed to be moved to MPH (see list in Section 2) will be cross-listed as ENS/MPH courses for the 2007-8 Academic Year in order to facilitate coursework completion for the remaining 3 students in the ENS Risk Sciences option. We do not anticipate any
current ENS student in the Risk Sciences option having trouble finishing their coursework by the end of Spring 2008.

4) EHAC Accreditation of the M.S. Degree Option in Risk Sciences in ENS
ENS sought EHAC accreditation for the Risk Sciences option during the academic year 2005-06, in hope to attract students to the Risk Sciences option. In Summer 2006, ENS received EHAC accreditation for the M.S. degree option in Risk Sciences. EHAC accredits undergraduate and graduate programs in the field of environmental health. Therefore, ENS does not see much relevance of the EHAC accreditation to its overall curriculum. In fact, given the interdisciplinary nature of environmental studies, no accreditation body exists that accredits environmental studies programs in this country. On April 21 2007, ENS and MPH jointly submitted an annual update report to the EHAC, informing them that we are in the process of transitioning the risk sciences curriculum from ENS to MPH and that ENS supports such a transition. Moreover, ENS students who entered the program in Risk Sciences option since 1995 would be eligible for claiming accreditation upon graduation should they desire so.