

# **SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT**

**October 2009 – SPEA – Bloomington**

Students can approach issues regarding sustainability from many perspectives, including an international perspective on sustainable development, and more desegregate levels including sustainability within a community, an organization, or a project/product/service. Because sustainability provides a lens with which to view other aspects of public and environmental affairs, the concentration is designed to permit double concentration with other areas including policy analysis, nonprofit management, economic development, comparative and international affairs, and various joint programs including the M.P.A.-M.S.E.S. With this increased scope and flexibility, developing a coherent course of study requires heavy reliance on concentration advisors.

## **Motivation for change in the curriculum**

### 1. History

The original design of the curriculum used off the shelf components only. It was designed to be implemented quickly and in a risk averse way so that if students did not materialize in the concentration there was little lost in offering it. The concentration was first offered during academic years 2008-09.

There is substantial evidence for student support of this concentration. Nine students have graduated with this concentration even though it was not available when they started their program at SPEA. Twenty-one 2nd-year students have selected it as a concentration, typically with other concentrations. Early returns for spring registration indicate it will be a popular concentration among first-year students as well. Additionally, a student association connected with this concentration, Sustainable Development Association (SDA), has evolved. The concentration has demonstrated its value in the program, meriting the development of targeted courses.

### 2. Preliminary Evaluation (Student Perspective)

Near the end of the 2009 Spring semester, a survey was sent through the SDA to all students who have declared Sustainable Development as one of the concentrations. In addition to degree program, class standing and plans for multiple concentrations, the survey asked how students define the objective of the sustainability concentration and how they were implementing it, or intending to implement it within the structure of the current concentration. Students were also asked about their career goals and how they felt the concentration was preparing them to meet those goals both with general knowledge and tools. There were also three questions about how they would change the concentration with respect to required courses, one regarding the flexibility of electives, and a final invitation for open comment.

Demographics of the 15 respondents were: 10 were from first-year students, the remainder from second-year students. Twelve were M.P.A. only; 2 were joint M.P.A.-M.S.E.S.; and 1 was joint M.P.A.-M.A. in Latin American Studies. M.P.A. students were also concentrating in Policy Analysis (3); EPNRM (3); CIA (2); Nonprofit Management (1). M.P.A.-M.S.E.S. students were concentrating in ECTRA (1) and Water Resources (1). This group is fairly representative of the current second-year crop with slight under-representation of the M.P.A.-M.S.E.S. students.

Observations from the student curricula: Database management and GIS courses SPEA-V 516, SPEA-V 518, SPEA-V 519, and SPEA-V 529 were not taken by any of the respondents. SPEA-V 507 was taken only by those individuals who had it as a requirement in one of their joint concentrations. SPEA-V 541 and SPEA-V 562 were taken through not required in other concentrations.

Many students did not indicate that they have taken or planned to take the required course in the Natural Environment section, possibly suggesting indifference about the material. Indeed, three of the respondents suggested that one introductory course had little benefit and that either more should be required or less.

Students suggested that there was too much duplication between SPEA-V 643 and other courses, particularly SPEA-V 596 and SPEA-V 625.

Many students, though certainly not all, suggested that the curriculum was too international in perspective, and they were more interested in pursuing careers leading sustainability efforts within a community or organization. While explicitly stated, this was also demonstrated in more support for the SPEA-V 622 than SPEA-V 669 course.

### 3. Preliminary Evaluation (External Perspective)

Concerns about global warming and other long-term social and environmental problems are stimulating an increase in academic programs relative to sustainability. At Indiana University, this includes current efforts in the College of Arts and Sciences to develop an undergraduate degree and plausibly graduate degrees in the near future. Nationally, Arizona State University has developed an entire, very well funded, School of Sustainability with an IGERT grant as well as substantial outside funding. Of our typical environmental competitors, Duke and Michigan are both offering sustainability-related graduate programs. The structure of Duke (Nicholas School of the Environment) allows them to market all of their masters of environmental management programs as related loosely related to sustainability. They offer joint coursework with their Business School (Fuqua). At Michigan, their degrees are offered in partnership between the School of Engineering and the School of Natural Resources and the Environment. They offer three concentrations: Sustainable Energy Systems, Sustainable Water Resources, and Sustainable Manufacturing, all taking an industrial ecology approach. The university also offers an M.B.A. and M.S. in sustainable business jointly with SNRE and Ross through the Erb Institute.

#### 4. Objectives

Objectives in the limited redesign of the concentration curriculum are to increase the desirability of SPEA's M.P.A. program as a whole, not simply add students to this concentration by having minimal requirements. Throughout the process it is important to distinguish this from other concentrations, particularly EPNRM, CIA, and Economic Development.

#### 5. Recommended Changes

The curriculum should be restricted into three areas of coursework: Basics, Context, and Tools with six credits in each section, rather than the current concentration structure with five areas.

Second, it is recommended that two new courses be added: one as required, SPEA-V 515 Sustainable Communities; and the other as a suggested tools course, SPEA-E 511 Sustainability Assessment. The proposed revised concentration is described and its rationale follows:

#### **REVISED: M.P.A. Sustainability and Sustainable Development Concentration**

##### **Required Courses** (6 credit hours)

The following two courses:

SPEA-V 515 Sustainable Communities (new course proposal) (3 cr.)

SPEA-V 596 Sustainable Development (3 cr.)

##### **Contexts for Sustainability** (6 credit hours)

Students will select two courses from a list of classes that examine specific contexts for sustainability (6 credit hours). Students are encouraged to develop courses that lead to expertise in a particular context (Policy: SPEA-V 625, SPEA-V 643, SPEA-V 710; Development: SPEA-V 576, SPEA-V 622, SPEA-V 669; or Sustaining the Natural Environment: SPEA-E 460, SPEA-E 522, SPEA-E 527, SPEA-E 545).

##### ***Development, Policy and Entrepreneurship:***

SPEA-V 550 Topics in Public Affairs: Energy Policy (3 cr.)

SPEA-V 559 Principles and Practices of Social Entrepreneurship (3 cr.)

SPEA-V 576 Approaches to Development (3 cr.)

SPEA-V 622 Seminar in Urban Economic Development (3 cr.) P: SPEA-V518 or course in urban economics or consent of instructor

SPEA-V 625 Environmental Economics and Policy (3 cr.) P: SPEA-V 517  
SPEA-V 643 Natural Resource Management and Policy (3 cr.) P: SPEA-V 517  
SPEA-V 669 Economic Development, Globalization, and Entrepreneurship (3 cr.)  
SPEA-V 710 Topics in Public Policy: International Environmental Policy (3 cr.)

***Natural Environment:***

SPEA-E 460 Fisheries and Wildlife Management (3 cr.)  
SPEA-E 522 Urban Forest Management (3 cr.)  
SPEA-E 528 Forest Ecology and Management (3 cr.)  
SPEA-E 532 Introduction to Applied Ecology (3 cr.)  
SPEA-E 545 Lake and Watershed Management (3 cr.)

**Tools Courses** (6 credit hours)

SPEA-E 511 Sustainability Assessment (3 cr.) P: SPEA-E538, V 506 or equivalent (new course proposal)  
SPEA-E 529 Applications of Geographic Information Systems (3 cr.)  
SPEA-V 541 Benefit-Cost Analysis of Public and Environmental Policies (3 cr.) P SPEA-V 517 or consent of instructor  
SPEA-V 547 Negotiation and Alternative Dispute Resolution for Public Affairs (3 cr.)  
SPEA-E 560 Environment Risk Analysis (3 cr.) P: SPEA-E538 or V 506 or equivalent  
SPEA-V 562 Public Program Evaluation (3 cr.)

Because of this concentration's flexibility, there is a strong emphasis on advising. Picking randomly among the list of above courses most likely will lead to an inadequate preparation for any career. Students are not excluded from taking a limited number of graduate courses (6 credit hours) elsewhere on campus, particularly Geography, Anthropology, Law or Business with the permission of their advisor. Because relevant course offerings in other schools change from semester to semester, specific courses are not listed.

## Rationale for changes:

1. **New name for concentration, Sustainability and Sustainable Development**, reflects its increased breadth, but does not sacrifice its current niche among schools of public affairs.
2. Though somewhat cliché, the new required course would fit with the statement, “Think globally (SPEA-V 596 Sustainable Development) and act locally (SPEA-V 515 Sustainable Communities).” Because of comments about duplication of course material, SPEA-V 643 Natural Resource Management and Policy has been moved from the list of required courses into the policy context area.
3. New course **SPEA-V 515 Sustainable Communities** is now required. The objective is to familiarize students with implementing sustainability objectives in organizations and communities. The current title is Sustainable Communities; a plausible alternative title might be Implementing Sustainability. The current course uses the University, the City of Bloomington and Indianapolis as a context.
4. Four course categories (each category with 3 credits) are replaced with two course categories (context courses, analytical courses, with the requirement of 6 credit hours in each section). The previous curriculum did not encourage the development areas of knowledge that transcended a single course. Most of the courses in the four eliminated categories have been reallocated to other areas.
5. Tools courses from the old natural environment section have been moved to the new expanded tools section. Other courses from this have been moved to the natural environment context section
6. Context area allows for three different coherent contexts for implementing sustainability: Development, Policy, or the Natural Environment. This reorganization is designed to facilitate specialization and depth.
7. **New tools course SPEA-E 511 Sustainability Assessment** was added. This course examines the construction of metrics of sustainability as well as their theoretical foundations, values and uses. Metrics on sustainability have the potential to turn vague concepts into more coherent objectives for action. There has been a proliferation of metrics in the last fifteen years and this course will concentrate on three of them at different scales: ISO 14040, life cycle analysis to evaluate products and processes; the Green Building Council’s LEED certification to evaluate the built environment; and the Association for the Advance of Sustainability in Higher Education’s STARS metric.