

## February 18, 2008    Retreat report: Interdisciplines in the sciences

**Convener / reporter:** Margie Anderson

### **Departments/Programs**

Departments: Biology, Chemistry, Mathematics, Psychology

Programs: Biochemistry, Engineering, Environmental Science and Policy, Neuroscience

### **Retreat Date**

Wednesday, January 16, 2008 and Wednesday, January 30, 2008

### **Departmental / program faculty in attendance:**

A total of 20 individuals participated; 16 attended each meeting. Most attended both. The names of the twenty participants are the following:

**Christine White-Ziegler, Steve Tilley, Christina Suarez, Stan Scordilis, Sarah Pruss, Beth Powell, David Palmer, Richard Olivo, Bob Merritt, Betsy Jamieson, Ginny Hayssen, Mary Harrington, Drew Guswa, Chris Gole, Rob Dorit, Lale Burk, Dick Briggs, David Bickar, Michael Barresi, Margie Anderson,**

**Outside guest(s)/speaker(s) in attendance:** N/A

### **Goals for the retreat:**

1. To develop a proposal to the Committee on Tenure and Promotion to Restructure the Appointment, Reappointment, Promotion and Tenure of Faculty at Smith College to facilitate shared appointments
2. To create a Natural Sciences Planning Committee

### **Outcomes:**

We explored both of these ideas on January 16, and further developed them on January 30.

1. The proposal to the Committee on Tenure and Promotion arose from an idea first voiced by Stan Scordilis in 2004. On January 16, **Stan Scordilis, Richard Olivo, Bob Merritt and Mary Harrington** volunteered to develop a draft that we could discuss at the second retreat. On January 30, it was the sense of the meeting that the language of the proposal be further developed and (when ready) carried forward for consideration by the President and Provost. Currently, the group has requested a meeting with President Christ and Provost Bourque to discuss the proposal in the context of the college's current policies on appointment, reappointment, tenure and promotion.
2. The idea to create a Natural Sciences Planning Committee arose from many informal discussions among faculty members in Division III about how we might develop a forum in which to exchange intellectual and curricular interests across disciplines and to develop mechanisms to share workloads and resources. After much creative brainstorming at the January 16 retreat, **Betsy Jamieson, Bob Merritt, Mary Harrington, and Rob Dorit** volunteered to develop a proposal to discuss at the second retreat. Our conversations on January 30 concluded that such a forum would benefit related departments and programs by allowing us to enhance what we already do well and also to encourage new cross-discipline efforts. For example, benefits could include ♦utilizing existing faculty across disciplines to staff courses and provide research opportunities to students, ♦strengthening existing interdisciplinary ventures and

fostering the development of nascent ones, ♦enhancing our joint competitiveness when applying for external funds, and ♦increasing our visibility and attraction to potential students. We agreed that – over the next two or three semesters – a few colleagues would be asked to serve on the Natural Sciences Planning Committee. They would meet informally three or four times each semester, identify specific issues to pursue, and develop appropriate mechanisms to ensure outcomes. In the near future, once the fruits of some interdisciplinary efforts are realized, the committee would be formalized.

**Plans to achieve outcomes:**

1. The proposal regarding appointment, reappointment, tenure and promotion is currently in motion.
2. The proposal to establish a Natural Sciences Planning Committee (NSPC) is currently at the stage of identifying individuals who would serve as founding members.

**How do your plans advance departmental goals as outlined in mid-term or decennial reports? N/A**

**How does the departmental/program plan to integrate the list of intellectual capacities into the major? For instance, are specific capacities such as writing, speaking or quantitative skills developed in particular courses, or a series of courses?**

We envision the NSPC as potentially instrumental in initiating cross-discipline efforts to foster the development of the capacities of students in the natural sciences.

**Of the specific curricular goals identified by the faculty which would be furthered within the major? (see page 8 of the Smith catalog for further examples)**

- **Develop the ability to think critically and analytically and to convey knowledge and understanding**
- **Develop historical and comparative perspectives**
- **Become an informed global citizen**

The NSPC would not intrude on specific departmental / program goals. However, it has the potential to provide additional avenues for encouraging achievement of these goals.

**Has the department integrated the development of student research abilities in the structure of the major? For instance, is there an information literacy program in place for students who major in the department? Is there a research methods course recommended for your majors (either in your department or another one)? If so, when in the student's career does she take this course?**

Although most departments / programs in the natural sciences offer methods courses and information literacy guides, the NSPC could serve to identify topics to include across the natural sciences and thereby fortify students' overall command of the natural sciences.

**Are the pathways through the major clear for prospective majors? Is the department satisfied with the level of advanced work accomplished by its majors?**

**(It may be useful to review the transcripts of graduating majors, or to examine the course taken patterns of several recent groups of senior majors.) N/A**

**What are the culminating or capstone experiences for students in your major? N/A**

**Please attach a summary of any proposed changes to be considered by the department and any associated timeline for changes to be submitted to CAP. N/A**

**Addendum:** This section of the report provides information on further developments of the two main outcomes of the two-part January 2008 retreat.

(1). **Stan Scordilis, Richard Olivo, Bob Merritt and Mary Harrington** met with President Christ and Provost Bourque to discuss mechanisms to form ad hoc committees on appointment, reappointment, promotion and tenure of faculty members who contribute to both departments and programs. The members of the interdisciplinary group believe that these mechanisms would have the potential of strengthening both programs and departments through beneficial cooperation.

The President and Provost noted that current college policies permit the formation of ad hoc appointment committees. Through consultation with a department and a program regarding its membership, an appointment committee would be made up of faculty members from both the department and program selected on the basis of their expertise in the field. These members would vote on the decision to hire a new faculty member, and they would also set up mentoring mechanisms to support the new faculty member during the probationary period. The President and Provost also noted that the formation of ad hoc reappointment, promotion and tenure committees is not general policy, although it is not without precedent.

(2) The Natural Sciences Planning Committee (NSPC) met three times during April 2008. Faculty members<sup>♦</sup> in attendance represented six departments (Biological Sciences, Chemistry, Geology, and Mathematics) and three programs (Biochemistry, Environmental Science and Policy, and Neuroscience). Our initial discussions emphasized that our group does not wish to impose on departments or programs or on the Science Planning Committee. Instead, we hope to develop a framework for communication that would allow stream-lined cooperation, enhanced programming, and economies of scale. Our initial ideas included ways to develop synergies between departments and programs, such as through coordinating talks in the life sciences, sharing research methods courses, facilitating team teaching, and encouraging students to do research projects that are not departmentally constrained. The general aim of these considerations is to encourage students to think broadly, see connections, and interact with other students across the sciences.

Whereas many of our ideas concerned long-term goals, we decided to focus on a single short-term project that would be accomplished in the 2008-09 academic year. Thus, we brainstormed topics for an interdisciplinary seminar series in the natural sciences and arrived at “The Ecology of Disease,” a topic that includes biomedical, environmental, global, and epidemiological issues. Our plan is to host four speakers who would also engage with classes. **Mary Harrington and Rob Dorit** agreed to spearhead the plans for this series of talks.

In a happy convergence of events, we learned shortly after making this decision that the college was awarded a Howard Hughes Medical Institute (HHMI) grant that included monies to support biomedical lectures. Thus, it became possible to support “The Ecology of Disease” series in part with HHMI funds.

Our longer term goals are in various stages of formulation.

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<sup>♦</sup> Chris White-Ziegler, Stan Scordilis, Amy Rhodes, Sara Pruss, Bob Merritt, Betsy Jamieson, Mary Harrington, Katherine Halvorsen, Rob Dorit, Barbara Brehm Curtis, Paul Atela, and Margie Anderson