

**Science Chairs Council**  
**Summary of the 4th Meeting - December 8, 2009**

**Attending:**

*Chairs:* Scott Miller, Meg Urry, Jeff Kenney, Rick Prum, David Bercovici, Mitchell Smooke

*Provosts:* Tim O'Connor

*Guests:* Joe Gordon, Bill Seagraves

**I. Teaching of specialized courses in sciences (Miller, Gordon, Seagraves)**

Joe Gordon, the Dean of Undergraduate Education and a long-standing member of Course of Study Committee (COSC), and Bill Seagraves, the Associate Dean of Science Education in Yale College, joined us for a discussion on the teaching of specialized courses in the sciences. Scott Miller requested this discussion after some Chemistry faculty expressed concern about a proliferation of "boutique" courses on subjects outside the primary department, e.g., "Chemistry for Astronomers" offered by the Astronomy Department (not a real example).

Dean Gordon said that the COSC has been concerned about overlapping and specialized courses, but they see much more of this in the humanities and social sciences than the sciences. We discussed recent experiences in Statistics and Mathematics. The Deans said some competition was healthy, and it was good to try different pedagogical models and to have different "flavors" of courses. In some cases it would help to advertise or promote courses rather than change them.

There are some separate issues for biology and chemistry on the medical side, since the premed requirements and the education of biology and biomedical students will likely be revised in the next 3-5 years. The biology chairs and leaders from the medical school should meet and discuss next steps.

**II. Reviving the Silliman Lectureship & Sigma Xi Chapter (O'Connor)**

The Silliman Lectureship is a prestigious Yale science lectureship with a ~100-year history that dwindled in the 1990's. The administration would like to revive it. It is funded by a broad indenture, and has recently carried an honorarium of \$10K (\$15K with book). We decide that there should be a Silliman Lectureship Committee to nominate people for the Lectureship. Steve Girvin would invite faculty to serve on the committee. Science & Engineering chairs will be asked to suggest faculty names.

Yale's Sigma Xi Chapter is also inactive, despite an endowment and funds to spend. The administration would like to revive it. In the last 1-2 yrs, Paul Fleury made some efforts to revive it, but it has not yet been revived.

**Action Items:**

- Tim O. will send info on the Silliman Lectureship to Jeff, who will send to chairs along with request for committee membership suggestions.
  
- Tim O. will learn more about recent Sigma Xi revival efforts, and then consider appropriate action.

### **III. Opportunities from the Generalized Galaxy Zoo (Urry)**

Meg Urry described the "Galaxy Zoo" project, in which "citizen scientists" have classified huge numbers of galaxies over the internet. Since humans are better at pattern recognition than computers, and each object is classified many times, this has produced more reliable classification than has been possible with computer algorithms, leading to new and interesting science. Other sciences could benefit from this new "citizen scientist" approach, which has side benefits of involving citizens and public school children in science, and drawing positive media attention. Yale could be a leader in this new way of doing science, especially if other fields become involved. The astrophysics group is currently looking for a post-doc, who might be able to contribute beyond astrophysics. Meg circulated further information to the Science Chairs, and people should contact her if they are interested.

### **IV. Review of Agenda Items for rest of year (all)**

We briefly discussed SCC priorities for the rest of the year, and issues that needed action.

1. HPC - Steve Girvin had decided to appoint a "Vision Committee", who would write a document outlining a vision for HPC at Yale. The committee has not yet been appointed, and Kenney agreed to ask Steve about this.
2. Diversify faculty - It was suggested that we invite Frances Rosenbluth, the Deputy Provost for the Social Sciences and Faculty Development, for a discussion on how to further diversify the faculty.
3. West Campus - Dave Bercovici has proposed an energy research center on the WC. Energy research is one of the most important and potentially lucrative areas in modern science. This would be great for Yale, and would involve a broader range of science than is currently being considered for the WC. Further discussion with the Science Chairs on West Campus development is warranted.

*Next Meeting: Tuesday, January 12, 2010*