Department of Life Sciences (LSCI) Meeting
February 6, 2009
1.30 pm ST 107

Minutes

Present: Kirk Cammarata, Stella Doyungan, Dave Grisé, Graham Hickman, Kenneth Ihenetu, Roy Lehman, Jonas Magnusson, David McKee, Joanna Mott, David Moury, Riccardo Mozzachiodi, Deb Overath, Lee Smee, Kevin Strychar, Greg Stunz, Rebekah Thomas

Call to order: 1:35 pm

I. Welcome

II. Approve minutes from previous meeting
Deb Overath moved that the previous meeting’s minutes (posted on the LSCI faculty website) be accepted; Lee Smee seconded; motion was unanimously approved.

III. Announcements/reminders
The Chair reminded faculty of the revised timelines for evaluations and scheduling and asked for submission of teaching plans to be submitted as soon as possible for summer and fall. Evaluation documents should included updated cv’s (replacing the annual fall request)

IV. Reports
Kenneth Ihenetu, reported on the library committee and requested faculty complete an upcoming survey and attend library orientations (college attendance has been poor for both in the past).

V. Updates/status
None

VI. Discussion/Action
The Chair clarified the main purpose of the meeting was to discuss the Annual assessment and action plan for both the department and programs levels (closing the loop).

The Department reports and administrative unit plans that had been recently completed were presented by the Chair. Two sources were cited:

• A comprehensive PowerPoint presentation about the Department of Life Sciences (including improvement plans and budget requests). This was
presented to the S&T Dean, who used it as a portion of his presentation to the Provost about the plans and needs of the College of S&T.

- The Department of Life Sciences administrative unit plan as it appeared in WEAVE. Mission, Goals, and Objectives were taken from the fall 2007 LSCI retreat. This is the first year that the departmental administrative unit is included in WEAVE, therefore no findings or assessments were possible (as there were no objectives or assessment measures from last year).
  - For action plans and budget requests, Mott had used the data collected for the PowerPoint, several discussions with the faculty and the unit plans of each LSCI program. Faculty input included the fall 2007 retreat where the first three faculty lines in the action plan were agreed to be priority and areas of research had been voted on, and several department meetings where there was discussion of department needs for faculty and staff lines and space needs (these can be found in LSCI Department meeting minutes e.g. Sept 26, 2008) as well as the input via the WEAVE program plans.

Lee Smee moved that the mission statement from the retreat remain unchanged for the next evaluation cycle; Overath seconded, and the motion passed unanimously. Overath moved that the goals and objectives from the 2007 retreat be discussed and re-evaluated at the upcoming (spring 2009) LSCI Faculty Retreat; Smee seconded, and the motion passed unanimously.

Mott ended her presentation with a summary of prioritized departmental needs and budget requests. The faculty deferred voting on the Chair’s departmental summary and action plan until the unit plans of the constituent programs had been presented and discussed.

Each program unit plan was then discussed, led by individual faculty (Overath, Mozzachiodi, Smee, McKee).

Graduate Programs

**M.S. BIOLOGY:** Lee Smee presented a summary of the Goals, Assessment Measures, Findings and Action Plans from the 2007-08 M.S. Biology Program Unit Plan (entered in WEAVE). For this cycle, all targets were met, and no action plans were necessary. Deb Overath moved that the 2007-08 unit plan (with no action plans) be accepted; Smee seconded. During discussion, however, several faculty members noted that in the two previous assessment cycles (2005-06 and 2006-07), the uses made of information from the unit plans, and the instructions provided for the preparation of unit plans differed significantly from the uses and instructions that were provided in fall 2008. Therefore, the Goals and Assessment Measures developed last year (for the 2007-08 cycle), although the targets were met, do not completely reflect the current uses of the WEAVE assessment reports and need some revision. This was accepted as a friendly
amendment, with the proviso that the revision be completed soon, so that the 2009-10 cycle’s findings will be based on the revised assessment measures. The revised motion passed unanimously.

**M.S. MARICULTURE:** David McKee presented a summary of the Goals, Assessment Measures, Findings and Action Plans from the 2007-08 M.S. Mariculture Program Unit Plan (entered in WEAVE). For this cycle, all targets were met, and no action plans were necessary. For Mariculture (as with the M.S. in Biology), the Goals and Assessment Measures developed last year (for the 2007-08 cycle), although the targets were met, do not completely reflect the current uses of the WEAVE assessment reports and need to be revised. This revision of the goals and assessment measures for the Mariculture Program is also necessary because the program is currently undergoing a program review and an expansion (with a change in name to Fisheries and Mariculture). Thomas moved for acceptance of the 2007-08 unit plan (with no action plans) with a revision of Goals and Assessment measures based on the findings of the program review, changes in the scope of the program, and changes in the uses of the WEAVE reports. Overath seconded, and the motion passed unanimously. The 2009-10 cycle’s findings will be based on the revised assessment measures.

**Undergraduate Programs**

**B.S. BIOLOGY:** Deb Overath presented a summary of the Goals, Assessment Measures, Findings and Action Plans from the 2007-08 B.S. Biology Program Unit Plan (entered in WEAVE). Although most of the objectives were met, two major ones were not: (1) Students’ understanding of biological concepts, as assessed by the Major Field Test in Biology, did not reach targeted levels, and a re-evaluation of the assessment design was the action plan. (Because the Biomedical Sciences Program had a similar unmet goal, discussion was deferred until this program presented its findings.) (2) Students’ understanding and use of the scientific method, as assessed by students’ participation in research laboratory experiences did not reach targeted levels, and the undergraduate committee had recommended investigating the reasons for this, and also re-evaluating the assessment design. (Because the Biomedical Sciences Program had a similar unmet goal, discussion was deferred until this program presented its findings.)

The undergraduate biology committee’s report noted that some components of the assessment measures (specifically, faculty members’ leadership in organizations and the community and students’ activities in the community) could not be assessed because of lack specific data (from the UCSO) or lack of personnel to search for the data. Infrastructure capable of gathering such information is necessary if assessment is expected. As the Department of Life Sciences is unlikely to receive additional personnel before the next assessment, such observations indicate that, like the graduate programs, the undergraduate
programs must revise their goals and assessment measures to better fit the current situation.

**B.S. BIOMEDICAL SCIENCES:** Riccardo Mozzachiodi presented a summary of the Goals, Assessment Measures, Findings and Action Plans from the 2007-08 B.S. Biomedical Sciences Program Unit Plan (entered in WEAVE). Again most of the objectives were met, but two major ones were not: (1) Students’ understanding of biological concepts, as assessed by the Major Field Test in Biology, and (2) Students’ participation in research laboratory experiences. (The undergraduate biology program also failed to meet these objectives, see combined section below.)

When analyzing objectives of the Biomedical Science Program’s unit plan whose targets had been met, discussion included the following suggestions: (1) Consider revision of the goals and assessment measures to better fit the current situation (as described previously for all other programs). As part of this revision, changing “Improve communications skills” [measured by students’ presenting at scientific meetings with no attempt to judge the quality of the presentation] to “Practice communications skills” was cited as an example of changing wording to more accurately reflect what is being measured. (2) Explore the addition of staff (infrastructure) needed to gather data or simplifying the assessment measures so that they can be accomplished with current faculty/staff in a timely manner. (3) Provide tangible evidence of critical thinking skills: “Critical Thinking” is currently assessed only by faculty self-reporting that their courses have a critical thinking component. In the future, this assessment measure should contain tangible criteria that will be used as evidence of critical thinking. (Perhaps a specific assignment or specific questions on examinations that are designed to demonstrate critical thinking?) Because of the difficulty of collating this data and lack of infrastructure to do so, it was suggested to limit such gathering of tangible evidence of critical thinking skills to upper division (or perhaps senior) courses.

**Common Themes—Undergraduate Biology / Biomedical Sciences**

**NATIONAL EXAMINATION (MFT)** Both Biology and Biomedical students’ understanding of biological concepts, as assessed by the Major Field Test in Biology, did not reach targeted levels. Both the undergraduate biology and biomedical sciences committees had suggested that the assessment design for biological understanding be re-evaluated. Overath made this motion, and Mozzachiodi seconded. During discussion, several potential avenues of examining the students’ poor performance were suggested: assume the scores to be reasonable, and modify the programs appropriately; correlate a student’s score on the different sections of the MFT with the student’s major and career goal; assume the scores do not reflect student understanding as students do not have an incentive to perform well and explore using a different national test (e.g., the GRE) which would be taken more seriously by our students; add an incentive (part of grade, taking extra courses if a student performs poorly) to encourage
active participation by our students, change expectations [simply lower them, or perhaps calibrate the system to link the MFT expectations to the entering students’ ACT or SAT scores]). After discussion, the motion was passed unanimously.

**RESEARCH EXPERIENCES:** Both Biology and Biomedical students’ understanding and use of the scientific method, as assessed by students’ participation in research laboratory experiences did not reach targeted levels. Both the undergraduate biology and biomedical sciences committees had suggested that the reasons for this be investigated (perhaps through a faculty and/or student survey). Mozzachiodi made this motion, and Overath seconded. During discussion, the following points were raised for consideration: 1) add students’ taking courses with laboratory or field experiences as a second measure of this objective, 2) determine whether or not the number of paid undergraduate research positions (from faculty educational grants) had declined, 3) determine if an increasing emphasis on graduate (especially Ph.D.) programs was causing a limited pool of faculty to fill research positions in their laboratories with graduate students rather than with undergraduate students (indicating a need for more faculty lines). After discussion, the motion was passed unanimously.

**Administrative Summary, Department of Life Sciences—Approval**

Following analysis of the individual programs’ unit plans, Moury moved that the report of the prioritized needs and budget requests for the Department of Life Sciences (as presented by Mott earlier in the meeting) be accepted as the administrative summary of the departmental needs and as an accurate synthesis of the individual programs’ needs as entered in WEAVE for the department action plan. Mozzachiodi seconded, and the motion was approved unanimously.

Undergraduate and graduate committees will meet to revise objectives and measures as discussed at this meeting and submit for full faculty approval. The deadline for WEAVE entry of these objectives and measures will be confirmed by the Chair and committees will be notified.

**VIII. New business**

None

The meeting was adjourned at 4:50 pm.

Respectfully submitted,
David Moury, LSCI Coordinator
Joanna Mott, Department Chair