CCGB Meeting Agenda, September 7, 2007

1. Approval of Minutes
2. Undergraduate Announcements
3. Reports
   a. June ’07 Math Placement Exam (F. Shumway)
   b. AEM Minor (R. Robbins or B. East)
   c. Orientation (F. Shumway)
   d. CHEM 209 Enrollments (F. Shumway)
4. Continued Discussion of Upcoming Business
   a. New Business (continued)
      • ABET review of ENGRD, ENGRI, ENGRG Courses
      • Small changes for ME Minor proposed by MAE
      • AP placement for statistics
   b. Agenda items from CCGB members?
5. Preliminary Discussion of Introductory Biology (no dept. input yet)
6. Request Reports from Each Committee (for next meeting) of recent activities and known agenda items

CCGB Minutes, August 31, 2007

Ex-Officio: L. Schneider, M. Spencer
Other: C. Pakkala, N. Peterson

Approval of Minutes: The minutes of the 5/11/07 CCGB Meeting were approved with minor modifications.

Undergraduate Announcements: None

Reports on Changes to Math 191, CHEM 209, CS 101: S. Baker stated that the Math 191 workshops occurred during the summer and went well. This was a trial run. He encouraged people to think about the workshops as a dynamic process—one that will be updated continuously. D. Zax and Garnet Chan are developing CHEM 209. He collected input on the topics needed in the course, and it was quite divergent. The Chemistry Department decided what would be most important to teach to engineers. CS101 is complicated. The JAVA version of CS101 is running, and the MATLAB version will be running in the spring. The workshops will be evaluated during the semester. L. Schneider said that there was a lot of effort during the summer to finalize the Math 191 workshop problems. The goal was to have students learn math better and be able to retain and apply the concepts in their later engineering courses. They started some assessment activities to track how far groups get on the problems in each of the workshops. M. Kelly designed a short test to test the retention of the Math 191 content. Students in his 200-level circuits course and students in the 200-level mechanics course will take the test at the start of this semester as a control group to compare to the cohort of students starting in Math 191 now who will take the test when they enter the 200-level courses next Fall. E. Fisher asked if the workshops were given in place of a recitation section. L. Schneider replied that the workshops are 50 minutes, and take the place of one of two regular recitation sections. Most of the TA’s helping with this are math TA’s. There was training last week for the course TAs and for the undergraduate course assistants who are also helping with the special sections. S. Baker said that if this works as it is supposed to, faculty should be told that there is a mechanism for solving math deficiencies—namely, workshop problems can be crafted to address areas of poor student preparation, as identified by faculty. A. Zehnder said that discussions have already begun with the Math Liaison Committee of starting Math 192 workshops for the next academic year.

Report from Liberal Studies Committee: E. Fisher stated that last year the Liberal Studies Committee started reviewing the way in which courses are reviewed for liberal studies credit. Students wanted to repeatedly appeal to take liberal studies courses. The committee felt that it would be easiest to have previously approved courses
put on a list, with non-approved courses on a separate NO list. They thought they would rely on CALS and/or A&S designations and approve the same courses that the two colleges currently approve. However, they learned that A&S doesn’t allow a course to be listed in more than 1 category and though it unfair. So Engineering will allow petitions on A&S or CALS courses to be considered liberal studies courses. R. Robbins developed a form for the petitions. The course instructor needs to justify their approval. The Liberal Studies Committee will meet 2 times each semester to review petitions. N. Peterson asked if liberal studies courses taken elsewhere would go through this process. E. Fisher replied that the Advising staff will continue to approve outside classes. CALS does allow multiple designations of liberal studies courses; A&S doesn’t. Hopefully this won’t be a cumbersome process. It is likely that a lot of AEM courses would be on a NO list. J. Bartsch asked if the NO list would be on the web or in some other prominent place. E. Fisher replied that it hopefully will be soon.

**EAS Major Name Change:** E. Fisher announced that the change of major name from Geological Sciences TO Science of Earth Systems was formally approved by New York State.

**Report on Admissions:** M. Spencer distributed a profile for the Engineering Class of 2011. The report comes from mid-July and is a snapshot of which students expressed an interest in the various engineering departments. It shows the admissions volume and profile of students enrolling at Cornell. There will be a multicultural hosting program at the end of September which will bring Native American, Black, Hispanic, Hawaiian and other multicultural students here. Admissions will also have a special visitation day for women on Saturday, October 20th. Admissions will email departments for their assistance with both programs.

**Election of vice chair:** E. Fisher asked J. Bartsch to be vice chair and he accepted. Vote: 9 in favor, 0 opposed, 0 abstentions.

**Committee Assignments:** E. Fisher asked the CCGB members to look at the committee list and decide if they want to be on different committees. If so, they should let her know.

**Preview of CCGB Business for AY 2007-2008:**

**Business Related to last year’s Curriculum Reform:** E. Fisher said that last year the College of Engineering passed resolutions to review the math/science/computing core to determine if changes need to be made. S. Baker said that the proposed resolutions addressed the issue of content within courses. Courses have wandered in various ways and we want to ensure that courses are teaching what we think they should be. The Curriculum Task Force became convinced of the principle that, in many ways, less is more. That is, common curriculum math, science, and computing courses should emphasize depth in fundamentals over shallow overviews. The goal is to present a coherent core in engineering so that students can build on those courses. E. Fisher said that Math & Science Subcommittee would work on the courses and review the syllabi. We eliminated CHEM 211 and added CHEM 209 and want to see how that works out. We have engineering-oriented workshops for Math 191, and there is a plan for assessing how well they work. CS101 has changed from a 4-credit 100 course to a 4-credit 100 and a 1-credit 101 course. We need to evaluate how well the changes are working.

**Wording of Advisor-Approved Elective Guidance in Handbook:** E. Fisher stated that last year’s CCGB was concerned that advisor-approved electives may be being too restricted by advisors. It is not clear whether we just need to change the wording in the handbook, or whether we want to work towards redefining these electives.

**Proposal to Admit Sophomore Transfer Students Preaffiliation:** E. Fisher mentioned some departments’ transfer admissions last year was problematic due to the difficulty in admitting students who had only 1 year of college completed and had not met departmental affiliation standards. Some departments are more flexible than others. L. Pollack said that she wasn’t able to admit any transfer students this year because they need core physics and math courses prior to affiliation. Her department (AEP) can’t apply one rule to their students and another to transfer students. It is hard to predict the performance of transfer students. It would be easier on AEP if students could be admitted as unaffiliated sophomores. E. Fisher said that if this remains as a perceived problem, we should continue working on this issue. Perhaps it would be good to poll colleagues about this.
Input to Restructuring of Introductory Biology Sequence:  E. Fisher stated that the new plan created by the Undergraduate Biology Curriculum Task Force proposes that biology majors won’t take introductory biology at all. They will instead take a larger number of core biology courses. That leaves introductory biology for non-biology majors. The task force had originally recommended 2 one-year introductory biology courses: one for life scientists other than biology majors, and one for physical science students. At a meeting on August 28th with a few engineering faculty, the decision was quickly made to eliminate the physical scientists’ introductory biology sequence. At that meeting, segregating engineering students in their own biology class was viewed as a negative. E. Fisher emailed the chair of the task force to defer making any decisions until he hears input from the CCGB.

L. Pollack stated that the task force met weekly throughout the academic year last year. Biology will be completely overhauled. The task force is thinking that a new introductory biology sequence would be a great opportunity for our engineers to take. They tried to be proactive and think about engineers who might want some biology. They tried to think about a course that might serve their needs. The response of BME is that there is no need for this and that students could take a the core biology courses, along with biology majors. Other faculty want an option of biology that is palatable to engineers.

S. Baker said that from the Engineering Task Force perspective there are 2 issues: The Engineering Task Force agreed that everyone should have some biology but they couldn’t identify common biology content for engineers anywhere. A biology course for the future would be good. The other problem is that they couldn’t find any space in the curriculum for a biology course. Yes, engineers should know biology, but we don’t know how to put it into the curriculum. L. Pollack said that we should view this as an opportunity to get input from biologists and design a course and figure out how to fit it into the curriculum. We should just have a course available for engineers. This is the time to think what should go in a course if there is interest.

S. Baker stated that competing schools that have incorporated biology courses for engineers reserved a time slot for biology by removing something else in the curriculum. We have more of a focus on majors and less on the common curriculum. If we want to incorporate biology, it needs to go somewhere. L. Pollack said that we could possibly make it an advisor-approved elective and just have a course available for engineers. E. Fisher suggested that we should not think about how to fit biology into the curriculum at this time, but rather about how our students can be served by having this as an elective. It seems there are 2 groups of engineers interested in biology: those who know in advance that they want to take 2 or more biology courses and those who might take 1 or 2 courses at some point. Many students might want to take only 1 semester of biology, not one year of it. We need to make sure that the topics the students need aren’t distributed over both semesters. Some majors might not care about the topics that are covered, but some departments might. Maybe some grouping of topics will occur by majors, which would be useful. The CCGB members should discuss this issue with their colleagues and get back to the CCGB with their input.

J. Bartsch stated that a list of topics in the common first year will drive departments to make decisions about majors earlier. This adds a complication for affiliation. He thinks more and more we should be admitting students into majors. Students don’t always do well in BIO 101-104. L. Pollack said that the sequence is being revamped and will hopefully work better for the students. E. Fisher said that she would invite people from the Undergraduate Biology Curriculum Task Force to come to the CCGB in 2 weeks.

The meeting adjourned at 9:03 a.m.

Postscript: Originally E. Fisher had requested departmental input on three specific questions about introductory biology. However, after the CCGB meeting, the chair of the biology curriculum task force requested that departmental discussions not be held this early in the process, and an e-mail to this effect was sent to CCGB members. We will hold a discussion of these topics on Sept 7 and 14, but without broader faculty input. The questions are:
1) Do the proposed core biology courses work well for students who are likely to take more than 2 biologically oriented courses?
2) For other engineers taking biology, is it desirable to have a special introductory sequence oriented towards physical scientists?
3) Which topics from the current introductory biology sequence are of high, medium, and low priority for students in your major who are likely to take an intro bio course or sequence?