Agenda, February 6, 2004
CCGB Meeting

1. Approval of Minutes
2. Undergraduate Announcements
3. Discussion of Nomenclature in Engineering: Programs, Majors, Minors, Fields, Specializations, Options, Concentrations and Tracks

CCGB Minutes, January 30, 2004

Ex-Officio: K. Athreya, D. Bell, D. Cox, B. East, R. Evans, M. Hammer, D. Maloney Hahn, L. Schneider, K. Smith, M. Spencer
Other: C. Pakkala

Approval of Minutes: The minutes were approved as written.

Undergraduate Announcements: D. Gries stated that there would be some changes made in the PeopleSoft system by summer 2004. The course-numbering system will be changed from 3 to 4 digits because some schools are running out of numbers to use for their courses. Departments will need to change the numbers of their courses by June 1st. D. Bell said that the new numbering system would be implemented in spring 2005. D. Gries added that departments could simply add zeroes after the old numbers if they'd like to do that. J. Bartsch asked if electronic grading would be included with the new changes. D. Bell replied that grading, courses, enrollment and transcripts would be included in the revised PeopleSoft system. He hasn’t seen the grading scheme in PeopleSoft yet but was told it will be a web-based system.

D. Gries announced that the Information Science, Systems & Technology (ISST) major has been fully approved by the state. The proposed Environmental Engineering major is currently in Day Hall and will be sent to the state for approval soon.

ABET—What The CCGB Should Be Doing: D. Gries stated that he hasn’t received the course syllabets that he needs from those departments seeking re-accreditation. ABET expects feedback loops to be in place and used by the time that the reviewers arrive. ABET needs to see post-course assessments for the common courses, and they should be submitted to D. Gries so that the CCGB can review them this semester and also in May. Cornell Engineering is one of the last schools to be reviewed by ABET, and they will be harsher with us than other schools that have already been reviewed. D. Cox stated that the trial evaluator for BEE said that half of the programs currently being reviewed in other schools have some deficiency and 75% have something that is a weakness or concern. We currently have no closed loops and are in trouble. D. Gries said that we still need some documentation about feedback loops with the math and distribution courses. He and D. Cox will go after committees to get this information. M. Louge said that he is uncertain who is responsible for what. The math, chemistry and physics courses fall into the purview of the common curriculum, and engineering also has distribution courses and a lot of other courses. Although he is aware of the need to contact professors for course syllabets, it is difficult to obtain that information when we don’t have much influence with people outside the college. D. Gries said that the Science Committee and other committees would need to get syllabets for the courses. One option is to write the syllabets the way we think they should be written and show them to the people in math, etc. for clarification. There is a Biochemistry Committee that could work on the syllabets. D. Cox suggested that it might be easiest to condense the syllabi for each of the courses into a syllabet. A. Center mentioned that the hard part is relating the course information to A-K. K. Pingali suggested that the information regarding the feedback loop be circulated to the faculty. D. Gries said that the information is already on the ABET website. He added that he also needs
documentation for course outcomes that show what the students did in their classes. His post-course assessment is on the website already, but other post-course assessments will not be available to everyone. Syllabets and post-course assessments can be sent to him.

**Math Sequence Syllabi Changes:** T. Healey stated that the material in the math courses would be rearranged. The Math and Science Committee has met twice since the last CCGB meeting. He admitted that dropping Math 190 and relying on Math 111 was not a good idea. The new chart has 190 back in place, and the proposed changes will line up the calculus and differential equations courses with those of other universities. The material proposed to take out of Math 190 is contained in Math 111, and the course finishes up with the fundamental theorem of calculus and definition of integrals. Math 190/191 will review the fundamental theorem and then move on. The changes will make Math 191 a standard calculus II course. Math 192 with these changes will become a standard calculus III course. The Math 293 syllabus hasn’t been cast in stone yet; it may be changed. The Math Liaison Committee will meet on Monday to discuss it. The suggested College of Engineering math requirement is something that can be worked on next. The Math Liaison Committee has been longing to change the math curriculum for years. It seems to be the rational thing to do and will be better for the students. D. Maloney Hahn helped him with the implementation ideas. C. Seyler stated that he thinks this change is long overdue and makes a lot of sense. Grubb: What we’re expecting here is a college-level calculus course having been completed before admission. A change in math course content is a matter for CCGB alone, but if we need to change admissions requirements, that’s another thing. M. Spencer said that 98% of the students who enter Cornell Engineering have a calculus background, but calculus AB is the bottom line. If they don’t have it, they need to take a calculus course at their local college. They’re required to have a unit of calculus when they apply. The College will need to identify students who aren’t at the level that other students are at. If the students took calculus in high school but aren’t at a high level, they might need extra assistance. There needs to be testing of the students to see what level they’re at.

T. Healey said that in Math 190 and 191 the students are bored up to prelim #1, which gives them the impression that the course is easy, but reality sets in during the second prelim. D. Maloney Hahn said that in May students are informed of the topics in calculus 191; they’ll pre-section students in their math courses during the summer. Students who have a less adequate background will automatically be put in Math 190. We’re introducing a prelim during the third week in Math 191. If students don’t fare well, they will be advised to change into Math 190 by permission of the instructor. During math exams held during orientation, students gave excuses, i.e. they were rusty, etc. T. Healey said that they would not widely advertise what the ramifications are of doing poorly on the Math 191 exam. They will simply have a prelim during week 3 of the semester. D. Maloney Hahn said that if students received between an “A+” and a “C-” in Math 191 at the end of the semester, they would advance to Math 192. Students who try to do well in Math 190 or 191, but don’t do well will receive a NGR. The students will come out better with the new assessments. D. Grubb asked how the pre-sectioning of a student with weak AP scores would be handled. The current Math 190 section doesn’t cover first semester calculus. There is no mention of Math 111 as an alternative. T. Healey said that he has taught Math 190 many times and all students know how to do limits and differentiate in some manner. D. Maloney Hahn stated that there would be a range in abilities. The AEW will be automatically put in Math 190. For students that go into Math 191 in the fall semester, there are a number of stages where deficient students will be caught. M. Louge stated that Advising did a wonderful job of working on this. On the exam given in the 3rd week, it is unusual in that results need to be tabulated and advisors and students know the results within a few days, which present a logistical nightmare. It might help to make the exam multiple choice to facilitate grading. He asked if we would keep a NGR for those students who have a NGR in intercession (December), who don’t plan to be at Cornell during intercession and then insist that they retake Math 191. D. Maloney Hahn said that the student will return after intercession and can then be retested. We can always expunge the course if the student doesn’t re-test.
T. Healey said that these new ideas haven’t been discussed with the Math Department, but he and D. Gries will likely meet with Ken Brown to discuss them.

J. Bartsch stated that if a student needed to take Math 191 in the spring semester, they could get a close equivalent of the new Math 192 in summer at another school. Currently, if a student falls outside the sequence, it is hard to take math courses elsewhere. T. Healey stated that any of the new courses could be taken at another institution.

R. Evans said that there are great ways to build in safety nets for students, but some have always been built in. The first time students are moved back in Math 190, it will set the terms for everyone else. It won’t be long before students understand how this works. Engineering should think carefully about how the math requirement is worded and explain it to students so they don’t think of Math 190 as a dummy course. D. Gries said that AEW’s are not a remedial thing. They simply help the students. D. Maloney Hahn said that the AEW is an elective and can be dropped. They won’t force the students to change courses after the test in the third week of the semester. Both in Math 190 and Math 191 there will be a NGR at the end if the student is trying. D. Cox stated that dropping a student back to Math 190 would have a psychological impact. It would be better to have an up-front assessment (placement exam) that would be more positive for everyone. By allowing the students to choose to drop back to Math 190, this would allow them to have their first failure. That is not a good start to the freshman year. D. Maloney Hahn said that the problem with the placement exam is that students feel rusty and feel that their abilities aren’t apparent. J. Bartsch said that he thinks that having an exam in the 3rd week is good because it unearths what the students really know. A number of times the students came in at the end of the semester and said they needed Math 190 because it gave them a better foundation in math. T. Healey said that even in pre-screening days they had students who had to drop back to Math 190. D. Maloney Hahn stated that there will always be students with different capabilities, and this proposal is a refinement of current procedures. D. Grubb stated that he heard general agreement for the curriculum change and suggested that a vote be taken on it. The vote was 10 in favor, 1 abstention, 0 opposed. M. Spencer said that the kids who have been admitted need to be informed about what’s been changed, as well as those transfer students who will be admitted in March. This will be a challenge. W. Philpot asked what the timing would be to implement the changes. T. Healey said that the timing would need to be discussed with the Math Liaison Committee. D. Gries stated that the CCGB should be able to approve the math changes without full faculty approval.

D. Grubb stated that the proposed College of Engineering math requirement had been approved previously. The math requirement stipulates that four math courses are required: Math 190/191, 192, Math 293 or 194 plus another math course determined by the field (which could be Math 293 or 194).

Science Liaison Committees: D. Grubb said that he has representatives from other colleges (but not from engineering) for the science liaison committees. He will contact people in engineering to serve on them.

The meeting adjourned @ 8:59 a.m.