CCGB Minutes, March 4, 2005

Ex-Officio: B. East, R. Robbins, L. Schneider, M. Spencer
Other: S. Coldren, C. Pakkala

Approval of Minutes: The minutes of the January 28, 2005 CCGB Meeting were approved as written.

Undergraduate Announcements: B. East announced that DiOnetta Jones had arrived at Cornell and assumed the position of Director of the Engineering Diversity Program.

Math 190/191 Procedures: A. Zehnder stated that the math issue was discussed at the previous CCGB meeting. The Math-Science Committee wanted to keep a safety net in place for the students, to give them a way to get through the math sequence. Arguments for keeping safety net for our students were strong. Engineering defines a failing grade as D, whereas other departments give an F to students who fail. A small number of students would fall into these guidelines. Students would still need to satisfy Math 191 prior to continuing into Math 192. There is a little concern about whether a D would affect a student’s affiliation. A D would remain on their record and affect their GPA. A student might want to retake the class for a higher grade.

D. Gries said that every major looks at students who don’t quite meet the affiliation requirements and in certain cases lets them in unconditionally. This could be done for students with a D who then take and pass the math exam in winter. A. Center wondered if it would be possible to say that Math 191 requires a grade of C or better. A. Zehnder replied that in Engineering a C- or better for Math 190 or 191 allows the student to continue into Math 192. D. Grubb reminded the CCGB that the requirement was passed by them in 1991.

D. Gries said that formerly the CCGB said that if an F was given for a course and the student took the tutorial, they could continue on. A. Zehnder clarified that those who got Fs in the course were not offered a chance to take the tutorial. D. Gries said that those students who received Fs but did all the work in the course received the NGR. Those who didn’t bother doing the work and received an F were not eligible to receive the NGR. J. Bartsch stated that the original intent of using the NGR seems valid and that if the grading structure were different, it would work out. B. East said that the only difference now is that the D is kept but students still have a chance to take the test and go into Math 192. D. Gries added that the students would have a D on their transcript and people with an F can’t take the tutorial/exam. R. Robbins said that a large problem with using the NGR was that the Math faculty wanted to give grades and not have the Engineering College change them. D. Gries said that about 15 people had the choice to take the exam. About 12 took the exam, and 8 or 9 passed and moved to Math 192. A TAM student gave the tutorial and gave the test.

B. Kusse stated that he thinks that offering Math 190 is a good idea, and a student receiving a D or F in the course speaks more strongly than a grade on an exam. He wondered how a student could make up a deficiency in the course by taking a makeup exam. He doesn’t think that a student studying during intercession can make up for a D or F in the course.

A. Zehnder said that his concern is that students will limp through the math sequence. D. Grubb suggested that this issue should be decided after the spring grades are in. He wondered how a C- would be considered passing and a D considered failing. Math is basic. If a student receives a D during a bad semester, a student could recover and get good grades in the rest of the sequence. This also depends on how math people grade. A. Zehnder stated that teachers are aware of the rules and know that a D is a failing grade. J. Bartsch
suggested that the first math courses be S/U because students would need a higher standard to pass an S/U course. This would solve the issue of whether a D is passing and might take pressure off of the students during their first year. A. Zehnder said that if S/U was used for math courses, TAM would have their whole first year S/U.

D. Grubb agreed to table the issue and have the CCGB make a decision just after spring grades are in, so we can see how well the students who passed the extra exam in January do in Math 192.

**CS 280 Substitution:** A. Zehnder stated that CS and ORIE have requested that the CCGB approve CS280 as the math course chosen by their major. For most ORIE students, the appropriate math is discrete math, so CS280 is a better course for them than Math 293. For CS students, this course would help balance the Engineering and Arts College CS curricula. ISST is contemplating this type of change also. Advisors need to be careful when advising freshmen about this issue. Half of freshmen are already taking Math 293 right now. He wondered if we want to have students graduate without a differential equations background. Communication with advisors and students will be key regarding any changes made.

J. Bartsch suggested that if CS280 is a math course, it could be cross-listed with the Math Department. D. Gries said that the Math Department shouldn’t have to cross-list it as one of their courses just to suit the Engineering College. The CCGB merely needs to check to see if it is a suitable math course.

C. Pollock said that he worries about lifelong learning and wonders if we are trying to train students to leave Cornell and grow with what they know. Differential equations is a fundamental piece of knowledge, and some of his colleagues have talked about how learning differential equations is essential to leaving Cornell and adapting. M. Louge deplored the proposed change as further fragmentation of majors in the College, and as further erosion of the concept of a core engineering curriculum. L. Trotter stated that he thinks math is a big field and there are many parts of it. How we define engineering is big. For the ORIE students, partial differential equations are not important. Skills regarding discrete math are more important.

K. Pingali said that at MIT last year in the ECE departments they said their students wouldn’t need Maxwell’s Equations. Their field had grown very big. Information engineering has expanded, and this requires a different type of math. Only Math 294 is directly relevant to what the CS students need. We are requiring them to take 3 semesters of calculus, but maybe they could get by with 2 semesters of calculus. B. Kusse said that we can’t add math in the junior or senior years. K. Pingali said that in CS there are also A&S majors. Engineering required too many credits for them to take, and we removed Math 222 from the curriculum for them. B. Kusse replied that there should be different college requirements for A&S majors and Engineering majors. C. Pollock said that in ECE they decided they need to go back to basics, like Maxwell’s Equations. They are going back to a core foundation, with more fundamental knowledge that can be fallen back on in 20 years. L. Trotter stated that math is a tool we use in engineering and is important for later on in life.

B. Kusse wondered why we include chemistry as a requirement in engineering and asked if it was solely for breadth. We have the requirements in place for a broad academic base. The AEP students need math that is not contained in Math 191 or 294. This is put in the students’ senior program, but not at the expense of chemistry. K. Pingali stated that he wants to use a biology course in place of Physics 214. Biology, chemistry and physics are a part of science, and he is in favor of a broad curriculum. Different majors could take different courses in these areas and still be engineers.

D. Grubb said that the CCGB discussed this issue in 2002. He asked what number of credits would be required in CS for graduation. K. Pingali said that the change would not change the total number of credits in CS because students will take another course. B. Kusse said that if the major will encroach on the core curriculum, room will need to be made in the junior and senior years for students to take something more important than Math 293. D. Grubb stated that he felt the issue was decided back in 2002 and approved by the engineering faculty. L. Trotter remembered that it was voted on by the faculty. M. Louge asked if the purpose of the CCGB were to just rubber stamp any proposal. L. Trotter replied that a committee could say that it isn’t an important course and that the discussion at CCGB could confirm that the course isn’t important and could refuse the proposal. His impression is that the CCGB does not merely rubber stamp proposals. M. Louge stated that the Dean of Engineering and the Student Services staff are encouraging a more flexible curriculum to allow students to study abroad, etc. Each step of the way things are added to eliminate flexibility. B. East said that Student Services is talking about flexibility and moving things into freshman year. D. Gries said that the Dean wants the whole curriculum looked at by some committee — the notion of a common curriculum, flexibility, study abroad, biology, etc. This needs to be studied during the next year or two. He recognizes that there are problems. M. Louge stated
that he is concerned about the advising issue. Some students are failing to take courses in their proper sequence. This change might be very confusing to students and advisors.

L. Trotter motioned to approve CS280 as the fourth math course for CS majors and that CS280 or Math 293 or Math 304 be the fourth math course for ORIE majors. K. Pingali: Seconded the motion. Vote: 7 in favor, 1 against, 2 abstaining.

Committee on Minors: D. Grubb stated that when he was assisting in setting up the CCGB Bylaws, he said that a committee on minors should exist. Since he was the one to propose it, he will be on the committee. He doesn’t expect anything to happen, but it should be set up, so he will be contacting people to serve on that committee.

The meeting adjourned at 9:00 a.m.