CCGB Meeting Agenda, February 10, 2006

1. Approval of Minutes
2. Undergraduate Announcements
3. ENGRG 235 (a new course proposed by John Belina)
4. ENGRG210 (from 3 to 4 credits)
5. Discussion of Math Department Proposal to Stop Teaching Math 190

CCGB Minutes, January 27, 2006

Ex-Officio: B. East, D. Maloney Hahn, R. Robbins, F. Shumway, M. Spencer
Other: T. Healey, C. Pakkala, N. Peterson, A. Schatz

Approval of Minutes: The minutes of the November 11, 2005 CCGB Meeting were approved with a minor change.

Undergraduate Announcements: B. East said that admissions applications are up more than 10% and are also up University-wide. ASPAC went really well and the Advising Office organized it well.
D. Gries said that some substitutions have been approved for required courses. A student took a test for Math 293 and received a B or better, so he received credit but needs to take another, higher-level math course. He wants to place out of Math 294 the same way. He doesn’t get transfer credit for the course he took elsewhere while he was enrolled as a student here.

J. Bartsch wondered if the ethics play was a success. D. Gries replied that it went well, although there were only 3-4 faculty members there. There were about 550-600 students who attended the play. An online survey of how it went was sent to the students, but no results have been received yet. The play cost about $11,000 to produce.

Preview of Spring ’06 Agenda and Committee Assignments: A. Zehnder announced that ECE wants to change one of their courses (taught by J. Belina) to a general (ENGRD) course. Minors remain an issue, with double or triple counting of courses continuing. He asked for information about the Curriculum Committee. There is a need for the CCGB to look at committees again.

Math 190/191: A. Zehnder stated that in the past couple of years Math 190 was used as a safety net by students who didn’t do well in Math 191. A tutorial was given for students to try to improve their grades. Most of the students were from impoverished backgrounds. A. Center said that the math deficiency might be a problem only with students without a good math background at their high school. If the majority of students come from good backgrounds, the need for a lower-level math class is diminished. A. Zehnder said that the Math Department gave a separate exam and tutorial. B. East said that the CCGB agreed to continue Math 190 last year because they were concerned that changing the curriculum would disadvantage students from disadvantaged populations, i.e. underrepresented students and women. A. Schatz said that students did relatively well on the math exam, but it wasn’t a fresh start. Six out of seven students passed the exam, but he is worried about them because starting with a C- isn’t a good basis for moving into Math 192. In the past it has been proven that the students will go downhill from there. A. Zehnder said that most students stayed at a C- at worst. A. Schatz stated that the students in Math 190 have a bad background in math already, and six weeks in the summer doesn’t prepare them for success in Math 191. Math 190 starts out with a review which takes 4-5 lectures, then the students are expected to catch up with the Math 191 class, but the only way to catch up with the
other class is to leave things out of the curriculum. The math sequence has been pushed up, with the requirement of 1 semester of calculus, but the rest of the sequence has remained the same. A poor student doesn’t have to fall behind. E. Fisher stated that in MAE a student needs to be done with Math 191 and Physics 112 by the end of their freshman year. A. Zehnder suggested that the classes could be taken as co-requisites.

T. Healey said that Math 191 is a second-semester calculus class which doesn’t overlap with other calculus courses. A. Schatz said that students could take a math course later on during the summer. T. Healey asked what happens to students who apply to Cornell Engineering without calculus. M. Spencer replied that the students are required to take it before they start at Cornell. They get a conditional admittance, but only if they are exceptional students in other ways. B. East said that calculus is published as a requirement for admittance. The students can’t do engineering without math. A. Schatz said that his impression of the students is that the Math 190 people had a poor calculus course--not up to standard. He finds it sad to see bright students struggle because of a lack of maturity in a subject.

D. Gries stated that he heard that Math 190 has poor students and also those who belong in Math 191. A. Schatz said that the advanced students represent about 50% of the students in Math 190; their advisors sometimes put them there. D. Gries said that this means that about 30 students shouldn’t be in the Math 190 class. B. East stated that if you ask a student to take another math class before they come, some of them can and some can’t, due to a lack of time or economics. An option might be to decide how to do an online placement exam when a student makes a deposit, then grade it and place them in appropriate courses. If they need to take a course prior to arriving, they should be asked to take it, and they will then know if they are behind or will need to take a certain course later. T. Healey said that a placement exam might help, but it might not. Probably students will still slide through. There will always be some students with a poor math background. They will come to Cornell, mess up on the first Math 190 exam, and they will need to go into Math 111. The Engineering College needs to figure out how the students can take Math 111. The damage can’t be repaired by having a softer version of Math 191.

A. Center wondered what the critical success measure is here. There are always one or two students who are denied affiliation, which does both the students and the department a favor. They might be better suited for something else. Students need a good math foundation, and a C– doesn’t indicate one. T. Healey suggested that maybe taking Math 111 would provide a good foundation. C. Seyler stated that there is no reason why students can’t fall back on Math 111. E. Fisher said that in their sophomore year MAE students need a certain sequence of things, which means students would fall behind. L. Pollack said that Physics 214 needs to be done by the end of the sophomore year for the AEP students, and there is no way that a student weak in math can make it. It is important to stick with the math/physics sequence, and math and physics should remain linked. If a student were to get out of sequence, that student would be behind a year. There is no time to explain math in a physics course, and some students have a weak math background. T. Healey stressed the need to do creative thinking and see if they want the weaker students or not. If they want them, they will need to be creative.

E. Fisher said that it sounds sensible to eliminate Math 190, but departments need to figure out a way to solve the problem so that other problems are not created. L. Pollack said that she understands the Math 190 problem, but she doesn’t want to keep students with weak math out of AEP. B. East suggested that maybe 80% of the students don’t have an economic problem and will be able to take a course at a community college; having an online exam might help spotlight them. D. Maloney Hahn said that we could give an exam right off the bat. Then the exam in Math 191 might place kids into Math 111. Some students could take 5 years of college instead of 4. There is no reason why they couldn’t stay longer in certain majors. We need to be creative to try and make this work. L. Trotter stated that if only 30 students are at risk, they could be identified by placement exam and advised to take
a certain course. If some are economically disadvantaged, maybe the college could help with that. The emphasis on math and doing it right at the beginning is very important; that is better than patchwork in trying to help them catch up. The numbers of students involved are very small. If math isn’t for students, they shouldn’t be in engineering. L. Lion stated that the College has a mechanism for placing students out of Math 191; they take the Math Department exam at orientation. He wondered why there could not be an exam for placing students into Math 191 instead of Math 111. D. Gries said that we want to identify the students in May or June so they can take a course in the summer. A. Schatz said that students didn’t study for the exam in August, they looked like bad students, and then they did well in the course because they had good math backgrounds.

L. Pollack suggested that the CCGB members give the information about Math 111 to their departments for discussion and to think about their options. They need to give the students an opportunity to become strong in math. A. Center suggested that the math exam be sent to the students along with their admissions documents, then if it were determined that they need help, they could be invited to come to Cornell during the summer. B. East said that sending the exam might scare the students off. It would be better to wait until they send a deposit, after they’re already admitted. F. Shumway said that the timing of the exam will be critical. We need to get the exam to the students as soon as they make their deposit. Schedules need to be done by the first week of August. Time is needed for giving the exam, grading it, placing the students properly, and giving them time to take a course during the summer. A. Zehnder wondered when departments need to decide this. The Math Department can do what they want, but it’s good to have CCGB input. He requested that people have a discussion within their majors about the issues and implications for their majors and then report back to the CCGB in two weeks. Then the Math Committee of the CCGB can collect the information, come up with a proposal, and make a decision prior to the end of February.

The CCGB members thanked A. Schatz for coming to the CCGB Meeting.

The meeting adjourned at 8:56 a.m.