CCGB Meeting Agenda, April 6, 2007

1. Approval of Minutes
2. Undergraduate Announcements
3. ORIE substitution of Math for Physics 214
4. Aerospace Minor
5. Changing ENGRD 241 to ENGRD 320
6. Eliminating Bioengineering Option as of Fall 2007
7. Course assessments
8. Discussion of next year’s CCGB members and committees

CCGB Minutes, March 16, 2007

Ex-Officio: B. East, L. Schneider, R. Robbins, F. Shumway
Other: F. Gouldin, C. Pakkala

Approval of Minutes: The minutes of the 2/16/07 CCGB Meeting were approved as written.

Undergraduate Announcements: B. East stated that Engineering Admissions is wrapping up selection as of 3/16. Hosting programs will start in April. In the next month or so will see kids roaming around campus with their families; we need to be nice to them.

Update on Math 191 Placement Exam: L. Pollack spoke about the summary information of the Engineering On-Line Math Exam. Thirty-six percent of the incoming engineering freshmen chose to take the exam. 170 students took the on-line exam AND completed Math 191. F. Shumway contacted the 14 students who failed the exam but passed the course to see how they prepared for Math 191. Of the 9 students who responded, 2 studied the Math 111 topics on their own during the summer, 3 took Math 001 at Cornell during the summer, 3 said that they did not take the exam seriously, and 1 did not prepare at all for the exam. Overall the exam seemed to be successful and, based on that success, we should give the exam again this year.

Three students took Math 001 and then failed Math 191, which is a serious concern. This concern should be addressed with the Admissions Office. E. Fisher asked if the students who failed the placement exam were told to do something. F. Shumway said that she checked the exam scores daily and contacted the student if they did not pass the exam or barely passed it. She then gave the student a list of options and also sent them a list of the Math 111 topics. E. Fisher asked if some students would still have taken Math 001 if they didn't fail the placement exam. F. Shumway replied that they would likely have taken it because they were already identified by the Admissions staff as needing to do something. A. Zehnder said that the failure rate for Math 191 was double what it had been the past year. D. Gries said that this year there were twice as many students in the course. Last year was the first time we didn’t offer Math 190. A. Zehnder said that Math 190 was taught by Al Schatz, who tried everything to get students through the course. L. Pollack suggested that perhaps Math 191 is too hard for our students. B. East said that we changed the curriculum a few years ago so that Math 191 is a harder course; it is now a second-semester calculus course. A. Zehnder stated that we shouldn’t be afraid to steer students into Math 111. B. East said that it is tough to decide who needs lower math based only on admissions data because some of the students have high SAT scores. E. Fisher asked if detailed exam results can be given to the 001 instructor. L. Pollack replied that they can be. She will meet with the subcommittee to discuss the online exam. The exam is worth doing this year.

Report from Liberal Studies Committee: E. Fisher said that the Liberal Studies Committee reviewed liberal studies courses, including CALS courses. The CALS liberal studies courses are similar to those in ARTS. The committee discussed liberal studies courses that were petitioned; they felt that it is not fair to rule that hotel or business courses are not allowed as liberal studies courses. Some are communications courses and similar to those taken in other departments. The committee is planning to compile a list of courses that were petitioned and de-
nied. They feel that this is a reasonable approach. They want to meet twice a semester to review the appeals of the Advising staff's denial of liberal studies courses.

R. Robbins stated that D. Gries contacted CALS and ARTS about their criteria for approving courses as liberal studies courses, and they said that they just know this type of course when they see it. E. Fisher said that ARTS feels that almost any of their courses would qualify as liberal studies. The committee will review about 30 courses to see if they qualify as liberal studies courses in engineering. Hopefully, we won’t need to do this for the courses each year. M. Duncan stated that the courses are not taught the same each year because sometimes different instructors teach them. Renumbering courses designated as liberal studies courses will be confusing for everyone.

D. Gries said that engineering will take the same designation as ARTS. R. Robbins stated that if there is a questionable petition, Advising will hold it for the Liberal Studies Committee to review. A. Zehnder asked if there will be a list of frequently petitioned courses. E. Fisher replied that there will be a list of unacceptable courses.

**Update on Curriculum Transformation Actions:**

D. Gries stated that the 1-credit java course will be taught during the fall semester. The matlab 1-credit course will be ready for the spring semester. The transition is taking a lot of time. The 4-credit matlab is ready for this fall.

B. East asked when the matlab course is to be completed. D. Gries replied that it should be completed by the end of the second year. S. Baker said that the Curriculum Transformation Committee is encouraging that the course be taken as soon as possible, but they can’t force the timing. Some departments can use different due dates. F. Shumway said that the course information will be included in updates of the Engineering Handbook, and individual departments will include it in their flowcharts. R. Robbins stated that the due date for flowcharts is sometime around 23 April. S. Baker said that majors should make sure that their prerequisites are where they need to be listed.

D. Gries said that CS 101J and 101M are the 1-credit courses. C. Seyler said that students can take both of the 4-credit courses. D. Gries said that if students take both 4-credit courses, they would not need the 1-credit course.

A. Zehnder said that a discussion concerning the integration of math and science will occur sometime in the future. The Math 191 workshops are moving ahead. The Math Liaison Committee met yesterday, and the response from the Math Department was good.

S. Baker said that there was a meeting with Chemistry last week. Chemistry and Engineering are in agreement that Chem 211 will be replaced with Chem 209 and CHEM 209 will be for engineers only. The Chemistry Department feels strongly about separating engineering students from those who take Chem 207. There are cultural and grade incompatibilities between the premeds and engineers, so they want to keep the two groups separate. Chemistry 209 would have the same content of Chem 207 but be for engineers. Chemical Engineering and those who require Chem 207 would have to decide if this is an acceptable alternative.

C. Seyler said that we underestimated the impact this would have on the Chemistry Department; this was a big deal to them. They wondered if there is anything we want them to do to tweak the Chem 209 content.

L. Pollack stated that she met with the Physics Liaison Committee. They are trying to decide where thermodynamics fits in this. They want to see the course syllabus for Chem 209 to determine where it meshes with physics to make sure that things don’t overlap.

B. East said that we don’t want to change Chem 209 into Chem 211. A. Zehnder asked who is talking with the Chemistry Department about the course content. S. Baker replied that there are groups that are looking at the content of all the core courses. Majors that require Chem 209 as a prerequisite for Chem 208 need to make sure that the content is the right content. We agreed with Chemistry that they would teach Chem 209 and it would have the same content as Chem 207.

We will look at the content of all the math and science courses to make sure they have the content we need/want. If we want the content of Chem 209 to be different from Chem 207, we need to tell Chemistry that. B. East stated that Chemistry has put on a cap in Chem 209. Students can’t take physics if they don’t have Math 191. We may have a few more than 500 students in Chem 209, but Chemistry may take petitions. S. Baker said that the Chemistry Department expressed a reluctance to teach 211 (or 209) in the spring if too few students take it.
Proposed Aerospace Engineering Minor: E. Fisher stated that the minor would consist of 4 courses from a “core aerospace” list, including MAE 305 and/or 306. Also required would be 2 courses from an “applicable to AE” list, with non-MechE majors being able to use 2 courses from a “fundamentals” list. Most of the courses are in the MAE Department. They want to make sure that the minor is accessible to students in other majors. They also wanted to make sure that there would not be too much overlap in the MAE major. They discussed different rules for students in other majors than those in MAE. They tried to make the aerospace core more accessible by broadening the prerequisites.

C. Seyler wondered how many MAE courses the EE majors would have for a minor; whether there would be 2 extra courses, 3 or 4. E. Fisher replied that they would probably need 2 or 3 courses. C. Seyler said that other majors would have to begin a concentration in MAE to need only 2 or 3 courses for the minor.

D. Gries said that each department will have to consider whether their students can take the minor. Department representatives should take the Aerospace Engineering Minor back to their colleagues and decide whether their students can take it.

B. East asked if the minor would fall outside what is normally taken by majors. E. Fisher replied that MAE feels comfortable with the minor because the major requires a separate concentration that is not counted as part of the minor. They do not feel that they are removing anything from the major. L. Pollack asked how many prerequisites are needed prior to MAE 305. E. Fisher replied that MAE 305 requires MAE 203 and 2 co-requisites. F. Gouldin said that non-majors can use other prerequisites not available for MAE students. They tried to make it easier for students to take this.

B. East said that the minor seems really easy for MAE majors. It seems that the philosophy should be that majors shouldn’t easily get minors in their departments. E. Fisher said that the minor consists of 6 courses; they would be using their free electives slots for this. It isn’t easier for MAE than for CEE students to take this. A. Zehnder stated that the Game Design Minor can be taken by CS students, so this is a similar situation. F. Gouldin said that they will require MAE students to do a concentration outside of aerospace so they will have a strong MAE program that is distinct from aerospace.

A. Zehnder requested that CCGB representatives discuss the minor within their departments and bring any issues back to the CCGB.

ORIE Physics Substitution: A. Zehnder stated that in 2003 the engineering faculty voted to allow a fifth math course to be taken in place of Physics 214. D. Ruppert said that the ORIE major uses many areas of math. His colleagues would like to see students take calculus, linear algebra, and discrete math. Some of their students are thinking of doing research or their PhD, and the undergraduate curriculum doesn’t prepare them well. They have proposed that students complete a fifth math course (differential equations or discrete math). They feel that substituting math for physics would be good.

A. Zehnder asked why ORIE does not make a fifth math course part of the major requirement. D. Ruppert said that they could do that, but it would add 4 credits to their major.

B. East said that engineering passed the substitution because we didn’t want departments to add more credits to their majors. D. Ruppert stated that it is hard to argue that everyone should take Physics 214 when it is not required. Students don’t feel that Physics 214 is important for them. Most students currently take Physics 214 and 4 math courses, and ORIE will still allow that. A. Zehnder said that given the college rules, there is no problem with this. The CCGB representatives should take this back to their departments and talk about it with their colleagues.

D. Ruppert stated that if the substitution is not approved, ORIE needs to know what would be allowable.

The meeting adjourned at 9:06 a.m.