CCGB Meeting Agenda, February 2, 2007

1. Approval of Minutes
2. Undergraduate Announcements
3. Discussion by Shef Baker on the Curriculum Task Force Proposals

CCGB Minutes, January 26, 2007

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

Approval of Minutes:  The minutes of the 12/15/06 CCGB Meeting were approved as written.

Undergraduate Announcements:  B. East mentioned that everyone got through ASPAC okay. She thanked everyone who participated. C. Seyler said that ECE denied more affiliations than usual. Grades of the students were low in general. They did some conditional affiliations, but some students were denied affiliation. M. Duncan said that CBE had the usual number of students who failed the affiliation criteria but were showing signs of improvement. Many students had disastrous third semesters, and CBE didn’t want to take a chance on them having a disastrous fourth semester. E. Fisher said that it seemed that more students were unaffiliated than usual. F. Shumway said that she was tracking about 175 unaffiliated students, which is about the same number as last year.

F. Shumway stated that the new Engineering Advisor, Melissa Hutson, is in training and getting to know everyone.

A. Zehnder said that the CCGB still needs to discuss the advisor-approved electives issue. The problem is that advisors have very different standards for what they will approve. A proposal is to change the advisor-approved electives to free electives. C. Seyler said that it is important to do this soon for the course catalog. F. Shumway added that the first round of changes for the catalog is due early in February.

ENGRI 113:  W. Philpot explained that the opportunity arose to make changes to ENGRI 113. The course previously involved field trips, the hands-on design of a water treatment plant, and work in a laboratory. During Fall 2007 the opportunity arose for students to work on Appledore Island. The eventual plan is for some students to do an internship on the island during the summer. ENGRI 113 is shaping up to be a decent course. D. Gries asked if students will go to Appledore Island this spring. W. Philpot replied that students don’t need to go to the island for the course, but J. Bisogni is planning a trip to the island in late spring. The course already exists, but this is a big change to a much broader design program. A. Zehnder asked if a discussion about the class included the goals of the ENGRI courses. W. Philpot replied that the goals came up briefly, but CEE literally responded to an opportunity that arose. The project with Appledore Island provides core design and hands-on, realistic experiences. A. Zehnder asked how many students are anticipated to take the class. W. Philpot replied that they expect about 25 students.

Motion.  E. Fisher motioned to approve the revisions made to ENGRI 113/CEE 113. D. Gries seconded the motion. The motion passed unanimously.

Assessments for Fall 2006 Courses:  D. Gries passed out to each CCGB faculty member a list of courses in their department for which post-course assessments are needed. Course instructors need to
show continual processes in the post-course assessments for ABET. He announced that he will begin calling people if he doesn’t receive these assessments within a week. He will give a list of courses that require post-course assessments to the people who teach the courses given this semester. We need these assessments every other year. The Engineering Courses Committee will review the assessments. We need the assessments by the end of January. He is willing to call people to prod them.

**EAS Name Change:** B. Isacks stated that in the middle 1990s the Department of Geological Sciences proposed to the CCGB that a new major be approved in the Engineering College, called Science of Earth Systems. The request was denied because it was felt that there was not sufficient difference of the intellectual content of SES compared to that of the existing GS major. The CCGB recommended that SES material be incorporated into the Geological Sciences major. This was accomplished by dividing the GS major into two “options”: Geosciences and Science of Earth Systems. When the Department of Geological Sciences joined with the atmospheric sciences faculty of CALS to form the intercollege Department of Earth and Atmospheric Sciences, another option to the GS major called Atmospheric Sciences was added. The three options had different requirements and courses. People complained. Deans, administrative staff, faculty in other departments, and students were confused. What did all these options in Engineering’s Geological Sciences mean? How could atmospheric sciences be even remotely considered to be a subset of geological sciences? Why were students in different colleges attending an identical set of courses required of their majors but graduating with different named majors?

In Spring 2005, a university External Review of Department of Earth and Atmospheric Sciences resulted in the recommendation that the number of majors offered by EAS be reduced through consolidation. In February, 2006, EAS faculty approved the consolidation of the curriculum of the Geological Sciences major with that of the SES major, through changes in the core courses. Because all SES majors must choose and complete a disciplinary specialization with at least four 300-or 400-level courses, the disciplinary knowledge of traditional geological sciences or atmospheric sciences would be organized as a specializations within SES. Other specializations include biogeochemistry and ocean sciences.

The change of name brings label into consistency with current practice of the curriculum. The name change reverses the hierarchy of names of major and its specialization areas. Students remain able to gain depth of education in geological sciences and atmospheric sciences, without the need to devote specialized pages in college literature to each flavor. Since “Science of Earth Systems” is the broadest description of the focus of the major, the name is more self-explanatory to non-specialists. There is no direct impact on ABET because EAS’s major are not accredited. The current name of the major in Engineering College is a historical remnant. The name change will simplify communications with students and colleagues in Engineering. The name change will create an identical name of the major as it exists in CALS and A&S, simplifying communications and increasing clarity across the three colleges in which EAS has majors. EAS presumes that there is no need to go to NYS because Cornell already has been approved to offer a major by this name through the Colleges of Agriculture and Life Sciences, and Arts & Sciences.

EAS has already changed their curriculum. This is simply a name change. The program is in place and in the catalog already. The Provost may have to go to the state for approval.

B. East asked if the Science of Earth Systems would exist in CALS, A&S, and Engineering. B. Isacks responded that it would. J. Bartsch asked how this major relates to the Natural and Environmental Systems major in CALS. B. Isacks replied that with the Natural and Environmental Systems major there is more of an emphasis on policy than with the Science of Earth Systems major. The programs sound alike, but they aren’t. One program is a basic science tract and the other is more policy and sociology oriented. Our students know about the new name and it is in the catalog. F. Shumway asked if this will still be the major that students take to become meteorologists. B. Isacks replied affirmatively.
Motion. A. Zehnder proposed the motion that the CCGB resolves to support the name change from Geological Sciences to the Science of Earth Systems. The vote was unanimous in favor of the motion.

A. Zehnder mentioned that there would be a CCGB meeting to discuss the advisor-approved electives in a couple of weeks.

Curriculum Task Force. E. Fisher asked if S. Baker could give the CCGB some information regarding the web comments about the proposed curriculum changes. S. Baker stated that the Curriculum Committee is continuing to meet. A fairly large amount of feedback was received from the web survey. Some topics can be easily addressed in the February faculty meeting. A lot of the responses were self-defeating. People chose to object to the consequences of things that might possibly be implemented. There was lots of disorganized resistance, which isn’t helping things. The Curriculum Committee is concerned that legitimate concerns exist about the process, but people are being antagonistic, which isn’t helping.

The Committee did a good job of trying to identify topics in 3 basic areas and coming up with concepts that should be discussed. The topics were: Should we have a uniform core, should it be broader, and what should it contain? Most people who had positive comments didn’t give a lot of justification for their opinions. After the February faculty meeting, unless it is widely discussed, the curriculum issue will become bogged down and get nowhere. People are staking out turf to defend and not having productive discussions. We want people to discuss the issues with their colleagues. The undergraduate curriculum is most basic to the college, and we need to try and understand it. We would love to hear about principal objections, but we have received mostly crazy objections.

The website has been open, and people should still add their comments. People don’t seem to care what the issues are; they just randomly object to things. This is not about the speculated outcomes listed in the report; it is about the principals. The global questions don’t deal with specific departments. We want to go to the February meeting with a small subset of issues that people don’t have objections to. Advocates and opponents aren’t speaking the same language.

S. Baker is willing to come to departments to discuss the curriculum issues. He wants a positive production at the meeting. C. Seyler said that we need to look at how the proposal was presented. The committee should have offered the principals for discussion. S. Baker agreed that the report should have been phrased differently. The committee spoke about the principals when creating the report and should have changed the focus. E. Fisher said that her reaction to the report was that it would be nice for engineers to have a common background, but it isn’t a core belief that she has. She wonders how it would be implemented and doesn’t consider it a high priority. S. Baker said that the committee had a fairly short time to put the report together. The main objections have been cost, benefits to students, and the need for measurable data. The proposal should start a good process. If we can prove it works, we can go further.

A. Zehnder asked if a summary of responses were available. S. Baker replied that a summary is not yet available, although he created FAQs in response to the responses. He will summarize the results for the 6 February meeting.

J. Bartsch emphasized that whatever responses came from BEE were not personal. S. Baker responded that he is fine with criticism. He is more concerned about responses that are strong and not related to the report. It might be the way questions were crafted. People need to decipher the intent of the report. J. Bartsch wondered if many or any programs say that the curriculum isn’t badly broken and are asking why we can’t keep it as it is. S. Baker replied that some people have said that. There were 3 broad categories that went into the report: things we could improve or things determined as problems; what is being done elsewhere—suggested in engineering research (we are extremely conservative); and a drift
from the original intent (what the intent of ENGRIs was initially). B. East stated that we’ll never be leaders if we’re always looking at things that are broken.

L. Pollack stated that she is a member of the Biology in the Undergraduate Curriculum Task Force, so she has a vested interest in biology. She extended the support of the task force to the Curriculum Committee. The task force is willing to assist in determining if biology should go into the engineering curriculum. Francisco Valero-Cuevas and Dan Lo from BEE are also on it. Mike Shuler might be on it. S. Baker said that the curriculum report says that we think biology should be in the curriculum. Many of our competitors have biology in the curriculum, but it isn’t impressive. If we can come up with an introductory biology course for engineers, that would be great.

D. Gries stated that he was at IIT Kanpur. This is a place where our undergraduates could go for a semester. The cost would only be $4,000 for tuition plus the study abroad fee. He is giving each department a list of courses and descriptions. IIT Kanpur is one of the best places to go for engineering in India. They also have a summer internship program to do research with a particular faculty member. CS has 4 or 5 Indian students coming to do research with Cornell faculty. We might end up with the students as our grad students. Dean Fuchs likes this idea. We may formalize this in the college so students from India could come and spend summers working with an individual faculty member. Dean Fuchs might provide funding for this. B. East said that we need opportunities for undergraduate research elsewhere for our students.

A. Zehnder stated that every day he receives an unsolicited email from a student in India wanting to do research. He wants to give research opportunities to our students instead. B. East said that if something were formalized, we could do a bit of an exchange. D. Gries said that there is the benefit that Cornell becomes more visible over there and we could get more students from India here. Our students should go there also. There are 8 different engineering departments at IIT Kanpur. IIT Kanpur also has a summer camp.

S. Baker said that he was with a group visiting Borg Warner. The plant makes 19 million timing chains each year and employs 1700 people. He asked them what they need from Cornell. They replied that the one thing they don’t have and can’t get is well-trained American engineers who are willing to go and live and work in China and India.

The meeting adjourned at 8:56 a.m.