Biomedical Engineering Partnership Program

2009 Annual Spring Meeting of the Graduate Education and Research Committee of the Biomedical Engineering Advisory Board (Friday, March 6, 2009-9:30 a.m.)

In Attendance: Dr. Anthony McGoron, Dr. Wei-Chiang Lin, Dr. Nikolaos Tsoukias, Dr. Steven Ponder

Dr. Lin began the meeting by explaining that the purpose of the meeting would be to discuss the research direction and current graduate program (PowerPoint Presentation)

1. Program Missions
   - The 6 program missions were discussed
     - Dr. Lin explained that the special emphasis is to serve underrepresented minority students
     - Dr. McGoron suggested thinking about the program mission because it was proposed when the program initially started in 1999
       - need to think about whether we need to change some things
       - most students are Indian and Chinese, but we don’t have a lot of other minorities
       - “Help attract more biotechnology industries to Miami-Dade County and South Florida”—good idea but should it be in the mission statement?
     - Dr. Ponder asked what exactly “Place-bound” students were—local students
     - Dr. Lin discussed that he believed we have access to minority students from our Undergraduate program and thinks that it should still be a major emphasis (need to bring minorities into research)
     - Dr. McGoron mentioned that many of our undergraduate program graduates are getting accepted into very good schools
       - Dr. Ponder asked if #3 “Supply additional minority doctoral graduates to the Biomedical Engineering field, where minorities are highly underrepresented” was still valid.
       - Dr. Lin believed it was and Dr. McGoron said we need to look into and update the mission statement based on the statistics
     - Dr. Tsoukias and Dr. Lin clarified that foreign students (who they both thought made up most of the labs) do not count as minority students

2. Current Status of MS/PhD Program
   - Dr. Lin explained that there was initially a high MS enrollment and then it dropped
     - He thinks this is because more PhD students are present and faculty spend more time with them
     - Dr. McGoron said it was important to note that the chart only showed the Fall semester, but that our MS program enrollment will drop
     - Dr. Lin discussed that there is a proposal to change the MS program to only have students take 10 courses and obtain an MS degree without a thesis or project so that less supervision is required
       - Dr. Ponder said his company hires more MS than PhD graduates but he believes project experience of some sort is important because otherwise how will they show that they are able to apply what they have learned
       - Will they still have a Senior Design Project?
   - Dr. Tsoukias said the problem is that it’s harder to do research with Master’s students because by the time you train them, they graduate soon after; that is why it is better to invest time doing research with the PhD students; also, we get MS students from India and China, but now we spend more money on PhD students so it’s hard to keep MS students in the lab for a year when they aren’t getting paid anything
   - Dr. Ponder asked how this would affect BME’s accreditation. He also explained that in his opinion (from a company viewpoint), a Masters graduate is good for conducting research and a PhD student can bring new ideas to the table
     - Thinks the Professional track is a good idea, he’s just not sure how the graduates will be placed
     - Dr. McGoron agreed that it would be hard if they don’t show how they can work as a part of a team, etc.
Dr. Lin explained that there is still a Masters Research track with a thesis.
He mentioned that research programs have slightly dropped because faculty members have left (Dr. Schoephoerster and Dr. Crumpler) but we are trying to recruit new Faculty members who will hopefully be hired by the end of the current semester.

3. SACS

- Dr. Lin explained that this accreditation process takes place every 10 years and FIU will be evaluated in 2010.
- Trying to organize documentation; during the last retreat the faculty was able to review program outcomes.
- There are 2 program outcomes for MS students.
- Explanation of learning outcomes—what we expect students to know by the time they graduate.

- Dr. McGoron explained that we received feedback from the University saying that we should revise the 2nd outcome for PhD students (expose PhD graduates to educational and research opportunities that prepare them to be leaders in academia and industry related to biomedical engineering), but suggested that we do that at a later time.
- Dr. Lin discussed the 2 ways we keep up with continuous evaluations: 1) exit surveys 2) orientation surveys.
- These help us to engineer changes in our program.
- Dr. McGoron asked Dr. Ponder if he would be able to look over the outcomes and let him know any suggestions or changes he had; Dr. Ponder agreed.

4. College Restructuring

- Dr. Lin explained how it has been discussed to join programs (mainly because of budget issues).
- Dr. McGoron explained that Biomedical came out of Mechanical Engineering.
- Dr. Ponder posed questions as to how the different informal tracks we have may be affected if we merge.
- Dr. McGoron agreed that this was an important issue and said we would most probably lose Adjouadi and Barreto if we merged because it wouldn’t make sense to keep them in both areas.
- Dr. Lin briefly updated everyone on the Faculty Search (hired Dr. Huang and are looking for another candidate—possibly with a research area focused on Biomechanics).

5. Research Directions

- Dr. Lin discussed how the faculty tried to consolidate the original catalog description during the retreat.
  - Gear directions more towards medical aspect.
  - Cancer and cardiovascular research are important issues.

6. CTIP—Collaborative Technology Innovation Program

- Dr. McGoron explained the Coulter Endowment.
- $50,000 a year to foster relationships—this was stopped when Schoephoerster left.
- Dr. McGoron mentioned that we need to advertise more to the industry board.
- He also explained that what used to happen was $10,000 was given, but not much further ever happened with the partner.
  - The purpose of the program would be to have $10,000 matched by the industry partner and $50,000 every other year and hope that one project will turn into a phase 2 project.
  - The focus is on commercializable outcomes.

- Dr. Ponder’s input: thinks it is a great program; the Senior Design Project last year was great—they only put in $2000 but the student’s did invaluable work; he thinks it works well for small projects and thinks it’s a great idea to help the community.

- Dr. McGoron explained that the problem in the past was that faculty were going trying to begin the partnership with the company, but we would like the companies to come to the faculty.
- Dr. Ponder said he believed companies would be interested and that we should advertise it.
- Dr. Lin and Dr. McGoron agreed that students got much more out of the Student Design projects when they worked with companies.
7. Strategic Plan

-Dr. Lin discussed the new FIU Medical School that is opening up and increases the chances of a collaboration
-Training grants were discussed and the importance of increasing the # of underrepresenting minorities
-Working on a new grant which we are hoping to submit by May which would support 8 PhDs and 2 post docs
-Dr. Tsoukias said now we can hire research faculty and we have postdocs who want to submit grants

-Student Recruitment: Dr. Lin explained that we have just established a Graduate Student Recruitment Committee and received $10,000
-Dr. Ponder asked how much we will be trying to recruit students in Miami-Dade and Broward County and suggest that we use this committee for “place-bound” students
-Dr. McGoron agreed this was a valid point and said that Dr. Li and Dr. Huang’s goals are to recruit better students from India and China than the ones we have now but we need to really look into how much is being done locally

**Dr. McGoron asked Dr. Ponder for suggestions about how to Increase the Advisory Board participation and create a 2 way street where everyone can benefit
-Dr. Ponder mentioned that he worked with Dr. Godavarty in her lab last year and thought it was a great idea because it’s not a lot of work for the industry partner and it has great outcomes
-Dr. McGoron said if we can improve the educational output of Miami than everyone should benefit
-Dr. Ponder suggested finding a mentor from the industry that could work with students on their projects

*Dr. Lin concluded the meeting.