Biomedical Engineering
Advisory Board Meeting Minutes

Thursday, July 23rd 2009
8:30 am to 12:30 pm
Room EC 2300

Attendees: Dr. McGoron, Dr. Christy, Dr. Byrne, Dr. Li, Dr. Lin, Dr. Adjouadi, Dr. Huang, Dean Mirmiran, Dr. Brown, Dr. Susan Jay, Werner Blumenthal, Santiago Galvez, Roberta Goode, Raul Herrera, Prasanna Jayakar, Lary Todd, Yasushi Kato, Melvin Rothberg, Gita Runkle, Rosanne Satz, Hamid Shahrestani, Josephine Shallo-Hoffman, Steve White

Chair’s Welcome and Introductions, Dr. Anthony McGoron, Acting Chair
Dr. McGoron welcomed the Board followed by a personal introduction of each member.

State of the College, Dean Amir Mirmiran. Dean Mirmiran thanked all for taking time off their busy schedules to attend this meeting and he assured the board that the College of Engineering is in excellent standing; he specified that the College is committed to the Biomedical Engineering Department which is the ‘crown jewel’ of the College for its connection to the College of Medicine. The college is committed to enhancing BME visibility and research portfolio. He went through some of the recent changes of the College (personnel) and informed the board that Dr. McGoron accepted to stay another year as Acting Chair while a search for a new chair is conducted this year. The Dean will appreciate the input from the Advisory Board on the selection of the new Chair.

Current State of the Department and Advisory Board. Dr. McGoron covered some of the history of the BME Department and our annual report and stated that we are at 10 years as a defined department and that we expect to be accredited soon. He reviewed some salient facts about our BME Department such as the current state of the Biomedical Engineering Department
(headcount of students, strength of the program, degrees awarded, Research Programs in the last five years). The data were included in the BME annual report provided to the board. It was decided that the Executive and Strategic Planning Committee should look into setting up goals and objectives for the Department and for the Advisory board/Partnership Program.

**Role of the Advisory Board in the Biomedical Engineering Department.** Dr. McGoron reviewed the role of the BME Advisory Board and its four subcommittees. The current roster of each subcommittee was distributed to the board members. Since this list was developed two years ago it needs to be updated. The meetings of the previous two years focused primarily on assisting with preparations for accreditation of the BME programs (particularly ABET and SACS). Dr. McGoron stressed to the board that we keep track of job placement for our graduates and that the survey we get from the Advisory Board is very beneficial for the ABET process and tells us if they are satisfied with our students. Dr. McGoron thanked the Board’s participation in the ABET process and expects the BME BS program to receive accreditation. The decision should be announced in late July or early August.

**Expectations from the Advisory Board, Dr. Susan Jay, Director of Development for the College.** Susan Jay led a discussion with all members present regarding the possibility of reinstating an annual contribution from the board. The general consensus of the members was that contributions come in various forms (time, efforts, and ideas) not necessarily as monetary donations and that since the board is an advising one and not an executive and cannot make changes to the program, the idea of mandatory contributions was questioned. Can specific benefits be defined so that Board Members can bring to their boss to justify participation and contributions to the Partnership Program? Hamid Shahrestani stated that a policy on the definition and list of “in-kind” contributions was developed a while back by a committee of the Board. Dr. McGoron will locate it. Melvin Rothberg from Rothberg Associates, Inc. stated that there are other revenue opportunities that would be much greater than Board member contributions that should be pursued. It was suggested for BME to come up with a list of specific items and expenses associated with management of the Advisory Board/Partnership and other activities with which the Department needs assistance. BME will develop an analysis of the Department identifying the areas to which we would like to see the Advisory Board channel its energies. A motion was passed to have the Executive and Strategic Planning Committee work on this and to review the Bylaws of the Advisory Board/Partnership Program (which date from 2001 before the Department was formed) and review the issue of membership and membership contributions.
Other items discussed: Undergraduate/graduate internships. Internships were discussed briefly. Beckman Coulter has, over the past couple of years, taken on a number of BME students and graduates as interns and this has been successful. Goode Consulting International, Inc. has also placed interns with companies with success. The expansion of internship opportunities to other companies should benefit the students, the companies and the BME program.

Senior Design Projects sponsorships, Senior Design Lectures and Senior Design Expo and Competition. It was suggested that BME make an inventory of the past projects (with attention to IP and confidentiality) and create a link in our website to advertise past projects or even a brochure to send to companies and hospitals. The responsibilities and expectations of the students and companies in the senior design projects should be clearly stated.

Roberta Goode from Goode Consulting International, Inc. stated that we have to make our students more competitive and that we may want to raise the bar by raising requirements in order to make students more employable and to send a message to the industry that we are producing quality students. She offered to contact her clients to let them know that their specific projects can be addressed by FIU students via their Senior Design Projects. Rosanne Satz, from Bionucleonics, Inc. said that we need a program to teach students regulatory issues and how to take products to market. It was stressed that we need to do a better job preparing our students for the job search. We should work closely with Career Services to help students learn to prepare a resume, interview, and even what keywords to use searching for job. Career Services can assist with “how to” workshops to teach students and graduating seniors how to interview, including behaviors such as being on-time, dressing appropriately, preparing good resumes and learning American cultural civility. Bring Career Services to the classroom. Remind them that companies may not require a Biomedical Engineering major when hiring, but may find it advantageous.

Dr. McGoron suggested that the Senior Design Project Research and Industry options are a huge benefit to both students and to industry as these projects offer the industry an opportunity to evaluate students before hiring them for entry-level positions. Dr. McGoron took the opportunity to announce the next Senior Design Expo this coming August 7, 2009. He also asked members to volunteer to deliver one-hour lectures for the BME 4098 course covering issues such as regulatory, IP, product market etc. This is the required course that was instituted last year. He passed a list of topics covered so far.
Website listing industry and FIU research and the Senior Design Projects to give ideas of possible collaboration: It was suggested that the Department and board members identify additional resources that BME should be looking to acquire, a sort of a “wish list”, that the Industry Partners can tap into. These should be added to the BME website.

The Department needs to explain to BME students what it and the Advisory Board/Partnership Program are doing to improve the program and help prepare them for careers in the BME industry. Graphs of how the activities of the board and changes to the academic program are resulting in improved student outcomes and student competencies. Posters of student output from their senior design projects, theses and dissertations should be displayed in the Department showing how many of the students benefited from activities of the Partnership Program. Student achievements include: internships, publications, GPA, job placement, time to employment after graduation, awards etc. Need to identify specific Industry/Student cooperation and interactions.

SBIR/STTR collaborative extramural grant opportunities. Dr. McGoron pointed out that the Department has a long history of SBIR and STTR funding and that this will be a great opportunity for industry/academic collaborations.

CTIP small projects seed funding: Members suggested advertising this program among the Advisory board/Partnership Program members.

Three grants have been awarded so far this year but there are still funds available for additional grants. This program is one of the endowments of the Coulter Foundation. In the past, contribution from companies has often been in the form of equipment which is not subject to FIU indirect costs (F&A). No CTIP projects were funded over the last two years. However, in the previous three or four years, five such projects were funded each year. Phase I is for a maximum of $10,000 (with an expected 100% company match) and Phase II is $50,000 (with an expected 100% company match). The expectation is that Phases I and II would be done on alternate years since each year about $50,000 is available from the account. The deadlines are flexible because the money needs to be used. Members would like to see examples of past projects to see the structure. Dr. McGoron encouraged members of the board to send us their projects.

He stated that if the match part from the company goes through the FIU Office of Sponsored Research (OSRA) then a 42% overhead (F&A) will apply (unless the match is equipment which
has no overhead). However, the match can be expenses by the company and does not need to come through FIU. However, IP issues need to be clearly defined.

The question was raised about IP ownership. Jointly developed IP will be shared by both parties. However, IP issues must be clearly stated in the agreement between FIU and the company. Dr. McGoron will see if there are examples of agreements between FIU and companies for past projects that can be used as a model.

**Research resources at FIU:** Dr. McGoron briefly listed some of the research resources at FIU that the Board Members should consider using. AMERI and Motorola Nano-fabrication facility is an open access facility for device development and testing; the Animal Care facility is available for device and drug testing and biocompatibility; the Cell Culture/Tissue Engineering is available for cytotoxicity and biocompatibility; and Molecular Imaging and Radiochemistry facilities are also available. Melvin Rothberg suggested making an inventory of skills and capabilities (both hard and soft) in order to identify additional resources and this way the board can assess the value of their help in guiding BME. For example, there may be a need for “wet” incubators for small companies. An analysis of faculty/program strategic alignments will identify resources that may be lacking or identify the strength that South Florida industry can take advantage of. What will be the “go-to” technology and core competencies of the Department in the next 10 years that the South Florida Industry can take advantage of and utilize? The Department will prepare an inventory of resources at FIU and the individual companies/institutions on the board will do the same.

Mel also suggested looking into Technology Transfer. All Board members strongly agreed. This has traditionally been a weak point at FIU that must be improved. Dr. McGoron will seek a joint statement from the board members to President-Designate Mark Rosenberg encouraging greater emphasis on the technology office and process at FIU.

**Department Research Focus Areas.** Faculty from BME made brief presentations of their research. Dr. Li presented Nanomedicine, Biosensor, Bioenergy. Dr. Lin presented Optical and Mechanical Methods for Tissue Diagnosis. Dr. Huang presented Tissue Engineering and Biomaterials. Dr. Adjouadi presented Source Localization of Epileptic Interictal Spikes and technologies to assist individuals with disabilities. More details of all BME faculty research can be found on the BME website at http://www.bme.fiu.edu/BME_Directory.htm